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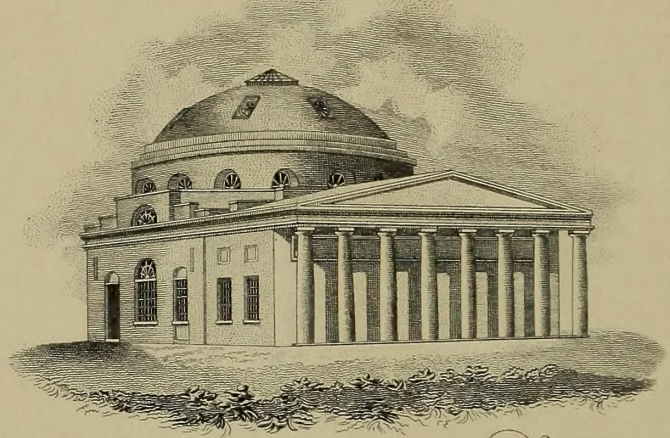

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1859 (b)

Author	Title
Linthicum, James Garrott	Intermittent Fever
Welling, William W.	Rheumatism
Stirling, R.H.	Inflammation
Wells, Benjamin	Inguinal Hernia
Hodgkin, Alexander Boteler	Clinical Report
Wheeden, Thomas J.	Fractures[1]
Wentz, George	Histology
Owens, Thomas	Menstruation
Moore, Dickey	Rubeola
Robosson, Thomas Perry	Typhoid Fever
Robinson, Robert K.	Abortion
Oliver, Joseph Lewis	Conservative Power of Nature in Disease
Quinn, Samuel Schoolfield	Oil of Turpentine
Waters, James Kinna	Clinical Report
Wilson, Charles J.	Opium
Hopkins Jr., Ephraim	Menstruation

1 Noteworthy illustration on title page

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UNIVERSITY OF MARYLAND

THESES

1859 (b)

Linthicum, J. ~~G.~~ James Garrott	Intermittent Fever	22p.
Welling, ~~W.~~ William W.	Rheumatism	30p.
Stirling, R. H.	Inflammation	20p.
Wells, ~~Benj.~~ Benjamin F.	Inguinal Hernia	15p.
Hodgkin, ~~Alex B.~~ Alexander Boteler	Clinical Report	30p.
Wheeden, ~~Thos.~~ Thomas ~~T.~~ J.	Fractures	24p.
Wentz, George	Histology	40p.
Owens, Thomas	Menstruation	23p.
Moore, Dickey	Rubeola	15p.
Robosson, Thomas Perry	Typhoid Fever	35p.
Robinson, Robert K.	Abortion	26p.
Oliver, Joseph Lewis	Conservative Power of Nature in Disease	26p.
Quinn, Samuel Schoolfield	Oil Of Turpentine	36p.
Waters, J. James Kinna	Clinical Report	27p.
Wilson, Charles ~~I.~~ J.	Opium	22p.
Hopkins, Ephraim Jr.	Menstruation	20p.

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An
Inaugural Dissertation
On
Intermittent Fever

Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine

By
James Garrett Lindsley
of Maryland.

Baltimore Feb 1859.

Intermittent Fever.

In viewing the great category of diseases, we find none more interesting, nor any more deserving our strict attention, than the one which we have chosen as the subject of our consideration. And although the subject, to us, may appear interesting, and entertaining I fear very much that I shall utterly fail in describing it satisfactorily to the learned Gentlemen, to whom this paper is submitted.

Hoping however they will duly consider the position we occupy as Students of medicine; & remembering that we are inexperienced in the cause, having had no practice, in the Great art of curing disease; and cannot therefore produce anything new or original. Consequently we must confine ourselves chiefly

- to the views and opinions of others.
Nor do we think it necessary to add anything more than has already been written by experienced practitioners, whose powers of description cannot be excelled, by a student of medicine.

There are some few things, connected with intermittent fever, which we are not able scientifically to account for at the present stage of medical knowledge. This however should stimulate us to greater diligence, and renewed exertions, in the investigation of this very important subject.

At present we must content ourselves with what has been written, by our worthy predecessors, and without adding anything further by way of introduction shall proceed at once to consider the disease.

Intermittent fever, is a disease

of miasmatic origin, characterized by febrile paroxysms, recurring at stated periods, and by the absence of fever, between the paroxysms.

This disease like most other disorders, is preceded by premonitory symptoms. A person who is about to be attacked by this disease, experiences at first a sensation of debility and distress, about the epigastrium. He becomes weak and languid, and unable to make any great bodily or mental exertion; begins to sigh, yawn, and stretch himself and soon feels chilly.

This brings us to the consideration of the different stages, the disease presents, which are severally named according to the phenomena, that characterize them; as the cold,

the hot, and the sweating stage.

The cold stage begins with a sensation of chilliness, first felt along the course of the spine, the blood deserts the superficial capillaries, the patient grows pale, the feature shrink, and the skin is rendered dry, and rough, presenting an appearance somewhat like the skin of a goose. Soon the slight sensation of cold, which was at first felt creeping along the back becomes more intense, and more generally diffused over the surface of the body; the patient trembles, and shivers all over; the teeth chatter, the knees knock together, and the integuments of the scalp become constricted causing the hair to bristle. Owing to the intense cold produced by the blood having

desired the superficial capillaries, the surface of the body in general is constricted. Rings, which, before the attack were put on with difficulty, become loose; respiration becomes quick and anxious; the pulse frequent but feeble, and the patient complains of pain in his head, back, and loins. All the secretions are generally diminished; the patients bowels are generally constipated, and his tongue is dry and white.

After these symptoms have lasted for some time, the second or hot Stage comes on; the shivering begins to alternate with flushes of heat, which usually commence about the face and neck. After a short length of time the face coldness ceases entirely,

The skin assumes its natural color, and smoothness; the collapsed features and shrunken extremities recover their natural color, and bulk. The reaction however does not stop here, but goes beyond the ordinary or healthy condition: the face becomes flushed, the temples throb, the general surface becomes hot and dry. The patient now has a sick headache, the pulse becomes full, strong, and frequent; the breathing is deep and oppressed, while the patient feels very uncomfortable and restless.

And now sets in the third or sweating stage. The skin which in the second stage was hot, dry, and harsh, now becomes soft, and a moist perspiration

beginning first on the face and
neck, soon becomes profuse over
the entire surface of the body;
giving great relief to the feelings
of the patient; the tongue becomes
moist, the secretions become some-
what more natural, the pulse
regains its natural force and
frequency, the pains depart,
and soon the sweating terminates,
and the patient is again nearly
as well, as he was before the setting
in of the disorder.

We have thus given a
cursory description, of the dif-
ferent stages, which are gener-
ally present, in intermittent
fever. But it should not be
that although it there are mostly
these well marked stages present
in the disease, yet in some case,

one of them is almost if not entirely wanting. When the cold stage is absent, it is called a dumb ague. We must also mention, that when all the different stages are presented in the disease, all the symptoms described are not invariably present; there are however generally enough present, to distinguish the disorder.

We cannot satisfactorily account, for the differences in the various types of the disease, unless it be owing to a difference in the intensity of the cause or to another cause.

There are many things pertaining to intermittent fever, yet to be accounted for. For instance the paroxysm returns. This is a fact which no believe has not been satisfactorily

explained: such an explanation, clearly given, would be an important acquisition to the science of Medicine. Here as in other instances we have to be mean our shortsightedness.

In the further prosecution of our subject, it will be proper here to consider the distinction, made by medical writers, on intermittent fever, between an intermission, and an interval. The period that elapses, between the termination of one paroxysm, and the beginning of the next, is called an intermission: While the period that intervenes, from the commencement of one paroxysm, to the beginning of the next is called an interval. These intermissions and intervals differ in different cases.

This being, so to consider the different varieties, the disease presents.

The three most common types, are the quotedian, the tertian and the quartan.

In the first or quotedian type, the fit comes on about the same hour every day, Generally in the morning, and lasts ten or twelve hours.

The second or tertian, differs from the quotedian, in that the paroxysm usually takes place, about noon, and then recurs again, after an interval, of forty-eight hours, or on the third day, counting, the day on which the paroxysm occured as the first. According, to Dr Watson, the average duration of the paroxysm, in this form, is about six to eight hours.

The third or quartan, differs from the quotidian, and tertian, viz, that the paroxysm, comes on usually in the afternoon, lasting from four to six hours, and recurring on the fourth day, counting, the day on which the paroxysm took place as the first; that is after an interval of seventy two hours.

Of course, we should not expect, the rules here laid down, to hold good in all cases.

Sometimes the paroxysm, commences earlier, than its regular period of recurrence, when it is said to anticipate; and is thought to indicate the greater intensity of the disorder. At other times, the paroxysm comes on at a later period, when it is said to postpone,

and is then supposed to be a favorable sign.

There are two forms of double tertian. Thus— a paroxysm may take place every day, and yet not be of the quotidian type; but, a double tertian. The paroxysms recurring at different hours, on consecutive days, and varying in regard to intensity.

Again, another form of double tertian will appear; thus, two paroxysms will occur on the same day, one in the morning, the other in the evening, and reappearing again in like manner on the third day, or at the expiration of forty-eight hours.

These rules will also hold good in reference to the quartan type. We may have a paroxysm occur on two—

days in succession, leaving the third day free, and returning again on the fourth day as it was on the first; and on the fifth as it was on the second; leaving the sixt day free like the third, and so on. Of all these complex varieties, the double tertian is the only one which often occurs. Authors mention other varieties, besides the above; such as the quintans, sextans, octans &c. Dr. Watson notices only two of these — quintans and sextans, and thinks them scarcely worth attention.

Having thus briefly noticed the various types of the disease, it will be proper in the next place, to direct our attention to the causes producing it.

The causes of intermittent fever may be considered as predisposing, and exciting. The most

efficient predisposing cause, is a previous attack of the disease, which renders the system liable to be effected, by agencies which otherwise would prove abortive. To this we may add fatigue, intemperance, or illness resulting from other disorders.

The most powerful exciting cause, is exposure to the influence of Malarious poison; though cases sometimes occur, which are not traceable to this agency. We believe however that even in these exceptional cases, the patient has on some previous occasion been exposed to the influence of Malaria.

This great exciting cause of disease, although certain in its effects, cannot be perceived, by the sense of smell, touch, or sight; it is only -

known by its effects. It is well known, that the three great agencies of heat, moisture, and vegetable decomposition in their combined form, are necessary to the production of this disease— not one of them alone, nor any two of them combined are adequate— all three must be present, in order to the effect.

We have thus reflected for a short period, on some of the causes of intermittent fever.

We will now consider as briefly as possible, some of the effects of the disease, as manifested during life; and also the revelations made by the knife of the anatomist.

If an intermittent be speedily checked, it will leave no other

unpleasant consequence, than a disposition to return; but if the disorder be long continued, or is provoked by protracted exposure to the cause, it almost invariably produces enlargement of the Spleen, and frequently of the liver also. A frequent result of the disease is dropsy, which may be caused by alteration in the liver, Spleen, and hepatic vessels; but more frequently we believe, it results from the anæmic or watery condition of the blood.

The lesions which have been observed upon dissection, (but few of which we believe, are essentially present in the disease,) are inflammation of the brain and its membranes; cerebral congestion and effusion, Gastritis, Gastro-enteritis, pulmonary

inflammation and Congestion, and various diseases of the liver and Spleen.

As we have cursorily considered the essential nature of the disease, its various types, the Causes producing it, its effects, and the pathological lesions observed after death: We will now examine in regular order its diagnosis; prognosis, and finally the most appropriate treatment.

Diagnosis. The only diseases with which we are liable to confound intermittent fever, are Typhus, and remittent fever. Hectic fever may in General be distinguished by the irregular recurrence of its paroxysms, the absence of head-ache, excessive and prolonged night sweats, the clear complexion, and bright eye.

and by the circumscribed redness found upon the patients cheeks.

Remittent fever is distinguished only by the continuance of fever during the whole interval. Sometimes it is difficult to decide, whether the disease, be of the intermittent, or remittent variety.

Prognosis. The prognosis, in the uncomplicated form of the disease is favorable. Inflammation of any of the vital organs, will of course render the prognosis unfavorable. But the chief danger of intermittent fever, is from those secondary affections, which result from neglect: such as, dropsy, and Chronic enlargement, and induration of the liver and Spleen.

Treatment. In most cases we should commence with an

efficient cathartic, to empty the bowels; such as the pil hydrarg, and rheum or the pil cath comp. N.

When the patient suffers much appression of the stomach, and nausea, with ineffectual efforts to vomit, an emetic may be administered; one of the best is ipicacuanha, but if the patient is very feeble, pulv. sinapis, may be substituted in the dose of a teaspoonful, diffused in warm water.

Bleeding in the cold stage, has been recommended by some practitioners, but we think this is seldom if ever neccessary. Other remedies recommended in the cold stage, are opium, the warm bath &c; which are often highly

useful, when properly administered.

During the hot stage, cool drinks, and refrigerant diaphoretics, may be used with advantage.

After the sweating stage has subsided, the surface of the patients body, should rubbed dry with to warm towels.

When the paroxysm is over, we should commence, (if the bowels have been sufficiently evacuated) with the use of some antiperiodic remedy, to prevent its recurrence. Of these the best is the Sulphate of Quinias, of, which ch from two, to three grs. should be given every four hours, either in pill or solution, with a few drops of dilute sulp. acid; until from twelve to twenty grs.

or more, have been taken, during the intermission.

Under some circumstances, it becomes necessary to give quinia, in much larger doses: as for instance, when the paroxysm is very short as in the quotidian variety. It is best however, to introduce it into the System gradually. If the stomach be irritable, the quinia may be injected per rectum; first being dissolved in "aqua dist," with a few drops Tinct Opii.

The antiperodics, should be continued for some time, after the occurrence of the last paroxysm; as the disease is liable to return.

There are several other alkaloids, of the bark

nearly as efficient as quinine, but not so frequently employed, after the preparations of Cinchona, the next best remedy is Fowler's Solution, which may be given, in doses, from four to ten drops.

Other remedies have been also recommended, as opium, willow bark, Sulphuric, Ammonia, Sulph Cupri, and all the vegetable bitters and astringents; but they are seldom employed at the present day; the great remedy being Peruvian bark or some of its preparations

And this finishes my consideration, of intermittent fever, its Cause, Cause, and treatment.

An
Inaugural Dissertation
On Rheumatism
Submitted to the examination
of the
Provost, Regents and Faculty of Physic,
of the
University of Maryland
For the
Degree of Doctor of Medicine
By
William W. Welling
of
Maryland
1859

Rheumatism

Rheumatism is a constitutional disease, attended with a peculiar irritation, to which all parts of the human system are liable to be affected. Rheumatism may be divided, according to its grade of excitement, into three varieties; namely the acute, subacute, and chronic. As I have now given the three principal varieties of this disease, I shal now proceede to consider the symptoms, causes, Diagnosis, Prognosis, and treatment, to the best of my ability.

Acute Rheumatism

Fever invariable attends this form of the disease. It sometimes proceedes the inflamation, but this occurence is very rare. The first symptoms are generaly local. In the great majority of cases, they show themselves in the extremities, this form of the disease may be confined to a single joint, or to a portion or the whole of one limb; but much more

frequently it occurs in several limbs, and different portions of the trunk either connected together or in succession, and very often it involves the whole exterior portion of the body. It has been noticed by some authors that when this last event occurs, one side of the body is more severely affected than the other, the small joints as those of the fingers, and toes, are less liable to be inflamed than the larger, such as the elbow, wrist, knee, and ankle.

Most always this disease begins with a feeling of uneasiness or stiffness in the part affected, which soon amounts to soreness or severe pain, especially upon motion, heat and swelling soon come on, and when the pain has been sharp and lancinating, it is very commonly lessened after tumefaction. Severe soreness however remains, and the slightest movements of the part cause suffering. The swelling is usually tense, and the surface

reddened but in many cases the natural colour is in no degree altered. The inflamation commencing generally in one part soon extends to others, as from the ankle to the knee, or from the ankle or knee of one side to the corresponding joint on the other, then to the wrist or elbow, sometimes in its course attacking neighbouring parts, sometimes distant parts in succession; and often disappearing in one seat, after fixing upon another. The swelling of the deserted joint does not immediately subside with the pain, but usually becomes softer, and, instead of being firm, will often pit upon pressure. Very often a joint is attacked a second time, and occasionally a third or fourth time, or even more frequently, before the disease ends. In some cases, the inflamation is confined chiefly to the neighbourhood of the [illegible] limbs; in others, it attacks more especially the muscles; in others again, both structures are involved,

and indeed all the tissues; the whole limb being swollen, tense, and very tender. In severe cases, the suffering is often very great. The pains, which are scarcely ever entirely absent, are at times almost excruciating; being described as tearing, rending &c,; and the slightest movement, or the least jar or pressure, causes so much suffering that the patient dose not dare to change his position, and dreads the approach of any one to his bed. The fever in this form of the disease is almost always of the asthenic character, though it varies in proportion to that of the local affection. The pulse is full, strong, and usually not very frequent, varying from ninety to a hundred and twenty, and in a great number of cases; not exceeding a hundred. The surface of the skin is generally warm, but not so much heated as in other fevers, and is generally moist, sometimes the whole surface is found bathed in

copious sweats, which have a peculiar sour and sickening odour, and have no effect in relieveing the inflamation or pain. The tongue is moist, and covered with a whitish fur. The bowels are often constipated, and sometimes very obstinate. The brain is very seldom or never affected but this disease is most certain to deprive the patient of sleep by the severity of the pains. very often, by long continuance of this disease, it may effect some one of the internal organs, producing a very serious consequence. The most frequent of these complications is inflamation of the lining membranes of the heart, constituting endocarditis and pericarditis. But the greater magority of these cases when taken in time yeld to proper treatment. Endocarditis is said to be much more frequent than pericarditis; but when pericarditis occurs it is more or less apt to

be complicated with endocarditis.
Pericarditis is more dangerous than endo-
-carditis, but the latter leaves the most
disasterous effects behind it, causing disease
of the valves which is followed in time
by hypertrophy and dilitation, and
finally by death. It is said by some
authors that rheumatism, when affecting
the ligamentous structure of the joints, is
more apt to extend to the heart, than
the same affection, seated in the synovial
membranes. Children, when affected with
acute rheumatism, are much more liable
to this complication than adults; and in
relation to the latter, the liability appears
to diminish with the age. It has been
said and no doubt is the case, that women
are more frequently affected than men.
Rheumatism may effect some other
of the internal organs, such as the pleura,
constituting pleuritis; this disease however,

seems, in most cases, to be an extension of the cardiac disease, or at least to occur in connection with it.

The duration of acute rheumatism varies, it may be arrested by proper treatment in a week or two; but it sometimes runs on for six weeks, two months or even longer. Perhaps the ordinary duration is from ten days to three weeks.

A decline of the disease is indicated, first by the diminution or disappearance of the pain, then by a softening of the part, so that, instead of being tense and elastic as at first, it will not unfrequently retain for some time the impression of the finger, and lastly by a gradual subsidance of the swelling.

Cause— the most frequent cause is exposure to cold and damp, after free perspiration, especially in persons constitutionally predisposed.

Sleeping in damp sheets or upon the damp ground, the wearing of wet clothes, exposure to

cold rains; and sitting in a damp, cold room; are examples of the kind of exposure which is apt to cause the disease. In some constitutions the system is more or less pre-disposed to the disease, and in what this diathesis consists has not been discovered. Children under eight years, and adults over sixty or seventy, are seldom attacked; and the period of life at which the disease is more apt to prevail is probably between fifteen and thirty-five or forty.

Diagnosis — This disease may often be confounded with gout, but by a close examination it can easily be detected, by the following symptoms. First — This disease affects chiefly the young or middle aged; gout the old. Second — rheumatism effects the larger joints; while gout, the smaller, and especially the feet and hands. Lastly — gout is attended with more obvious disorder of the digestive organs; the pain is of a more burning character, and the swelling is greater and more vividly red.

Prognosis— When properly treated, it usually gets well. The chief danger is from the complications of the cardiac disease; but this as I have already stated, generally yields to active treatment.

Subacute Rheumatism

This variety is very common, it occurs usually in the muscles, though it may also attack the joints, involving either the synovial membrane, or the surrounding ligaments. The pain is often quite severe; but there are much less fever and swelling than in the acute variety. There is also redness and heat, and the swelling is less tense and elastic, than in the acute form. There is sometimes increased secretion of the synovial fluid, and fluctuation may be observed in the vicinity of joint, especially the knee.

But this variety of rheumatism is not

confined especially to the muscles and joints. For it is capable of affecting any of the tissues. I am inclined to believe, by my own experience, that it sometimes attacks the nervous sheaths, producing pain, upon pressure along their course, and extending an irritation to the nerves themselves, which is felt in pain and spasm of the parts to which they are distributed.

This variety of rheumatism is in a certain degree, liable to metastasis, certainly more so than either the acute or chronic. For in the acute variety, the inflamation is so great as to give a strong direction of the disordered tendencies to its own seat; while in the chronic, the disease appears often to be almost local, and no disposition to change;

But in the subacute, the constitutional tendency is strong; and the local affection

is so feeble, that it readily yields to causes which give the irritation another direction.

In order to complete a view of this variety of rheumatism, I shall consider it in some of its more prominent seats. Not unfrequently it attacks the muscular and fibrous tissue of the scalp, producing pain in the head, often quite severe, soreness of the scalp on pressure, pain on movement of the occipito frontalis muscle, and also the presence of rheumatism, in some other part of the body, is sufficient to distinguish it from nervous or sick headache, for which, without care, it may be readily mistaken.

Rheumatism sometimes attacks the muscles of the neck, especially in the sterno mastoid muscle, and very often affecting both sides of the neck equally,

in which case the head is held stiffly
erect, and steadily looking forward, but
much more frequently one side is dis-
-ordered, and the head is drawn towards
the affected side, and causing but little
pain, when the patient remains quiet,
but on moving the head it causes
intense pain. This form of rheumatism
not unfrequently effects the muscles
of the chest causing pleurodynia,
which is characterized by severe, acute,
and shifting pain in the side upon
taking a full breath or coughing, and
also, [redacted] by the general absence of fever.

It sometimes attacks the diaphragm
producing severe pain over the epigas-
-trium, and in violent cases, is increased
to agony by every attempt to take
a full inspiration. Breathing, is
often very difficult and [illegible]pressed,
and not unfrequently attended with

feelings of suffocation. The swallowing of food produces acute pain at the point where the oesophagus penetrates the diaphragm; and sometimes the food is rejected in consequence of the spasms thus produced.

Causes— The causes are the same as those of the acute variety, but dependent more upon a difference in the constitution, which from any exciting cause will more readily give rise to the disease.

Diagnosis— The suddenness of the attack, the severity of the local compared with the general symptoms, the sharpness of the pain upon movement when the muscles are concerned, the frequent mobility of the affection, and the superabundance of any tendency to suppuration, are characters by which subacute rheumatism may be distinguished

from common inflamation occupying the same parts.

Prognosis— This form of the disease is almost always favourable, in fact never fatal, unless when it attacks some vital organ, as the heart, brain, or stomach; and even then it may very generally be relieved by appropriate remedies. The greatest danger is a sudden attack of the muscular structure of the heart, so as to arrest its movements.

Chronic Rheumatism

This variety of rheumatism is most apt to fix upon the joints, and the synovial membrane. It sometimes attacks a single joint, sometimes extends to several; and may be either fixed or moveable. There is generally no fever nor heat, but little redness, and only an obscure dull pain, usually worse

at night and in damp cold weather. Persons affected with this form of the disease can not unfrequently foretell the approache of wet weather, from the pains produced by the damp cold winds that precede it. It may last in this way a lifetime, and is either the result of the acute form, or is produced by the same cause, only modified by the constitution.

Sometimes the muscles become affected and waste away, shrink, and become shortened. There is generally a complete absence of fever in chronic rheumatism; unless in some cases in which disorganization of the joints has taken place, with purulent secretion, ulceration &c., in consequence probably of the development of common inflamation.

This disease may generally be relieved for a time, but is very apt to return

again. Sometimes it perseveres steadily, in spite of the most efficient remedies, rendering the life of the patient miserable, and wearing him out at last by the incessant pains. But unfrequently, suppuration takes place in the joints, the synovial membranes ulcerate, the cartilages are absorbed, abscesses form in the soft parts and discharge externally, and the patient is at last worn out with hectic fever; or the denuded ends of the bones granulate and unite, forming complete anchylosis.

The duration of chronic rheumatism varies. It may continue for months, years, or a lifetime. Many persons affected with this form of rheumatism, have intervals of comparative comfort, generally, recovering there health more or less completely during summer;

to return again in ~~winter~~, or varying with the condition of the weather; to the changes of which they become exceedingly sensitive; so as frequently to anticipate the approach of bad weather; before it becomes obvious to others.

Causes— The causes of chronic rheumatism are the same as those of the acute variety. Age seems to have a great influence in this respect. The old are peculiarly liable to this form of rheumatism; though they are very seldom attacked by the acute variety.

Diagnosis— The disease with which it may be confounded are common and scrofulous inflamation. But from this form of the disease it may easily be distinguished by its occurence in individuals known to be rheumatic; especially in the earlier stages, the absence

of any tendency to suppuration; the sense of coldness which sometimes attends it, and its being agravated by wet damp weather. This form of rheumatism may also be confounded with palsy, but the progress of the disease is so different that, if proper investigation be made, there can be but little difficulty in the diagnosis.

As I have now brought to an end, the consideration of the different varieties of rheumatism, I shall make a few remarks with regard to the nature of this disease, though I can say but little of the real nature of rheumatism, all that is known of the nature of rheumatism is that it is peculiar, and that it owes this peculiarity, not to the character of the ~~disease~~ cause, but to some

unexplained conditions of the sys=
tem; called the rheumatic diathesis;
which I am unable to say any thing
of; some writers believe this diathesis
to be a morbid state of the
system; or in fact, the true
disease; and that the irritation
and inflamation by which its
is recognized; are merely symptoms
of its full developement.

Treatment

In the acute variety; when the
pulse is full and strong; bleeding
should be employed in proportion
to the strength of the patients
constitution; and to the resistance
of the pulse. The loss of blood
in rheumatic patients is generally
borne well, and the operation may
be repeated several times; if called
for by the symptoms.

The quantity to be taken at each time varies, generally, from ten to twenty ounces may be taken from a person of a healthy constitution, and a strong pulse; but it should be regulated according to the strength of the constitution. Purging is probably more efficacious than bleeding. Nature occasionally points out this remedy by curing an external attack, through the supervention of diarrhoea. Sulphate of magnesia, jalap, and bitartrate of potassa, and when there is congestion of the liver, calomel, in combination, are generally suitable remedies to begin with. The purgation should be repeated every other day; but, after the first or second day it will be sufficient to combine sulphate of magnesia with the wine of colchicum.

This mixture is well adapted to cases originally mild, or in which the excitement has been reduced by depletion. Should the bowels become irritable, the purgatives should be suspended. An objection to purging is the difficulty of changing the position of the patient, but this may generally be obviated by the use of the bed-pan.

After the commencement of the disease, the bowels having been evacuated, and blood, if deemed advisable, taken from the arm, opium and ipecacuanha should be given at bed-time, to allay the violence of the pain, and produce sleep. A grain of each, repeated, if necisary, at the end of every two hours, and increased somewhat as the system becomes accustomed to it.

After a few days, when excitement has been subdued by depletion, this combination may be given at certain intervals, through the day and night, so as to keep the system always under its influence.

Should these remedies have failed to make the desired impression, at the end of one or two weeks, it will be advisable to employ calomel with a view to its alterative influence. If the case be in a somewhat advanced state when it first comes under the notice of the physician, the calomel and opium treatment may be commenced at once.

There is generally a speedy abatement of the symptoms on the occurence of ptyalism, or a slight soreness of the gums. It is seldom required to induce a copious salivation;

and the mercury ought always to be suspended at the first decided indication of its action upon the mouth.

Should the heart or brain become involved, in the course of the disease, depletion by the lancet must be carried as far as it can be borne; cups or leeches must then be used freely, and these must be followed quickly by a large blister. In the cardiac affection, the cups may be applied between the shoulders, and a blister eight inches by ten over the region of the heart, if the brain should become involved, the head should be shaved, cups applied to the scalp and temples, and afterwards, should the symptoms continue alarming, a blister should be applied over the whole head. Along with these means, calomel should

be given promptly and freely, so as to induce ptyalism.
In cases of retrocession of the external disease, efforts should be made, to bring it back to its original seat by sinapisms, or other active rubefacients, and, should the feet have been the part affected, by hot stimulating pediluvia.
Towards the decline of the complaint, when the parts are swolen and painful, anodyne and rubefacient lotion are sometimes useful, such as camphor liniment, and camphorated tincture of soap with laudanum, and the same preperation with the addition of spirits of ammonia. At a still more advanced period, when the disease threatens to become chronic, repeated blisters are the most efficient remedies;

and, if the rheumatic pains are severe, acetate of morphia in powder may be sprinkled upon the blistered surface.

Cold water, has been recommended, as an application to the inflamation of acute rheumatism; and it will no doubt often remove the local affection; but there would be great hazard of producing some serious internal disease.

Dr. Balfour recommends flannel bandages, as being occasionally used with advantage, when the case threatens to assume the chronic form, but they are wholly inapplicable to the acute condition. The hot bath is very useful, in some cases, after the subsidence of fever and acute inflamation, when the surface is pale and inactive,

and the local disease adhesive.

Dr. Hope, recommended the early and vigerous use of calomel and opium, alternated with active purging." The plan which he adopted from Dr. Chambers, was, after full bleeding in the robust, to give eight or ten grains of calomel, with a grain and a half of opium, every night, followed in the morning, by the infusion of senna with salts, sufficient to procure at least four or five stools. At the same time, a saline draught with fifteen or twenty minims of wine of colchicum, and five grains of Dovers powder, was administered three times a day. The calomel was omitted when the swelling and pain greatly abated, or the gums became in the least tender." According to Dr. Hope,

the patients generally recovered under this plan in a week.

Subacute Rheumatism — In this variety, bleeding is seldom required, and should never be used, unless the patient be robust, and the pulse tolerable strong. Purging should be considered one among the best remedies in this form of the disease. Sulphate of magnesia, combined with the infusion of senna, followed, every other day, with the mixture of magnesia Epsom salts, and wine of colchicum root. If the patient be too weak to permit a continuance of this course, his bowels may be kept open by a mixture of sulphur with magnesia, or with bitartrate of potassa. After the bowels have been once evacuated, Dovers powder may be prescribed. This is often very effectual in

subacute rheumatism, putting an almost immediate end to the com=plaint. The hot baths is often very useful in this form of the disease, and may be associated, in somewhat obstinate cases, with the Dovers powder, or colchicum. Cups or leeches are often very useful, and may be freely applied. They are however seldom required; as the disease in great ma=jority of cases, yields in a few days without them. The parts affected should be kept covered with flannel, carded wool, or cotton, or to have it protected only by the ordinary clothing, of which a part, in this and all other kinds of rheumatism, should be flannel next the skin.

Chronic Rheumatism - In this variety, bleeding is rarely employed, unless when the complaint approaches to

the subacute form, and the patient is robust, a moderate quantity of blood may be taken from the arm with advantage. Purging in this variety is of great use. The character of the cathartic employed should vary with the degree of the activity in the local affection, and the strength of the patient. When the disease is fixed in one of the large joints, and there is no apprehension from debility, a dose of jalap and cream of tartar, or of senna and salts, may be given twice a week for a long time.

If the patient suffers much from pain, during the continuance of the purgative plan, he may take the Dovers powders every night, and if this be proceeded by the hot bath, the curative effect will often be very decided. Various narcotics are usefully employed, especially when the disease is very painful. The tincture of colchicum, stramonia, belladonna, and conium, are especially worthy of

notice. Vigorous exercise sometimes proves an efficient remedy. The patient should always wear flannel next his skin, unless in the very hottest weather; when silk may be substituted. The diet must be adapted to the state of general excitement, and the degree of inflamma=tion.

Local Remedies— Occasionally leeching or cupping, is often very useful, but when the disease is fixed permanently in one part, and does not change, repeated blistering is far superior to all other remedies. Poultices containing carbonate of soda are said to have proved beneficial.

W. W. Welling
Clarksville
Howard Co.
Md

AN

Inaugural Dissertation

ON THE SUBJECT OF

[illegible]

submitted for examination

TO THE

Provosts Regents & Faculty of Physic

of the

University of Maryland

for the **DEGREE** *of* **DOCTOR OF MEDICINE**

by

R. H. STIRLING

OF MARYLAND.

Inflammation

Various definitions of Inflammation have been given by different Writers It may be defined to be a perverted condition of the tissues, blood, and blood-vessels of a part, interrupting its healthy function, and changing its natural structure, ordinarily attended with Redness, Pain, Heat and Swelling; and inducing more or less disturbance of the general system. The first of the four main symptoms of Inflammation, Redness, is produced by an increased amount of blood being in the part so that the smallest capillaries become distended with red blood, those vessels which in the normal healthy state carry only white blood, when in a state of Inflam-

=mation carry red. When the Inflam=
mation is acute the Redness is of a bright
scarlet tint, when it is chronic it is of a
darker hue, and in certain specific
inflammations it is purple or copper
colored. Several terms have been made
use of by different Writers to express
the different varieties degrees and ap=
pearances of Inflammation, these how=
=ever are not very important - they are the
Ramiform, Capilliform Uniform, Punc=
tiform and Maculiform. The Heat
in the inflamed part is due principally
to an increased flow of the blood to the
part - it is also due to the more rapid
oxydation of the tissues of the inflamed
part, this of course produces more heat.
Swelling is due to the presence of blood
in the part also and principally to

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part, this of course produces more heat.
Swelling is due to the presence of blood
in the part also and principally to

effusions of serum and lymph that take place. When the parts inflamed are of loose structure the serum is generally effused in the larger amount. When of dense less serum and more lymph is thrown out. The form and shape of the swelling vary with the different tissues inflamed. When the cellular tissue is involved the swelling is conical. When the skin is affected it is diffuse. It is always in the greatest amount in loose tissues. - Pain - This is due in the first place to a morbid sensibility of the nerves of the part - it is due also to the great distention of the bloodvessels, and to the pressure on the nerves of the part by the effused fluids. - The pain in the cellular tissue is of a throbbing character owing to the larger bloodvessels

being in that tissue, this is wanting in the skin (when it is burning or tingling) as only the capillary vessels are present there - It is always most severe when the products of Inflammation are con=
=fined as in Paronychia - The pain sometimes is not felt at all in the inflamed part, as for instance in disease of the Hip joint, when the pain is felt in the knee or in the right shoul=
=der when the liver is inflamed.

Results of Inflammation

These are 1st Resolution, This is nothing more nor less than the disappearance of the inflammation, and the gradual return of the part to health. When the disappearance of the inflammation is sudden it is called "Delitescence" when a new inflammation is set up in its

place it is called Metastasis - Softening
This is the most common result of In-
flammation - from the parts which are
much engorged fibrine is exuded which
coagulates in the form of granules, these
break up and soften, together with the
tissue which they infiltrate - this is
more commonly the result of acute than
the subacute and chronic inflammation,
these are most apt to produce Induration -
This process of softening has been shown
of late to be a mere variation from
that of suppuration - this result - (Sup-
puration) is the production of pus - It
is called Laudible or healthy pus, when
of a light color, inodorous and without
taste, It is composed of globules floating
in serum - When it is thin and con-
sisting mostly of serum it is termed

"Ichor." When it is mixed with a virus as Venereal or Vaccine it is termed "Specific" When it is mixed with mucus it is termed "Muco-purulent" when mixed with Serum Sero-purulent. The occurence in the process of Inflammation of suppuration is indicated by signs more or less severe, by the fever which has previously existed, abating by the tumour becoming softer, and loosing its bright color, and as the matter in-=creases in amount it begins to point at its centre, and fluctuation may be felt by pressure with the finger, the tumour becomes more and more prominent, the centre of it becomes of a dusky red or bluish tint. The cutis is removed the cuticle bursts and the pus escapes. When the

suppuration has been very profuse and has continued for a considerable length of time it produces what is called "Hectic Fever" which is an irritation affecting the constitution - but different from the inflammatory type. — Exudation of Serum — This is one of the most common results of Inflammation - it may be effused into the interstitial cellular tissue, in the Parenchyma of organs and from surfaces lined by mucus and by serous membranes and the skin. It is the result of subacute inflammation - It is thrown out more in parts of a loose and cellular tissue than in the more dense - Exudation of Lymph occurs from a free surface actively inflamed

as from the Pleurae, Tunica Vaginalis
Exchymosis - Effusion of blood, - This
is generally occasioned by the coats of
vessels giving way, This occurs in
Pneumonia and Dysentery and in
the latter disease particularly in very
large quantities and sometimes has
a salutary effect in these diseases.
but it is usually injurious from
the pressure it produces and from
exciting irritation - The next result
of Inflammation to be treated of is
Ulceration - From the observations
of the more recent Writers on the
Pathology of Ulceration it has been
shown to consist in the "softening
disintegration and removal of successive
layers of the Ulcerating tissue". Hunter
thought it was entirely owing to absorption

but he does not seem to have satis-
-factorily proved it. The more violent
the inflammation the more rapid is
the Ulceration. When the part is ulce-
-rated with great rapidity it is termed
"Phagedenic" When it has ulcerated
to its fullest extent it is termed "Slough=
=ing Phagedena" ~ Congestion is a pre=
=disposing cause of Ulceration ~ The
skin, cellular tissue and mucous mem=
-branes are more liable to inflammatory
ulceration than the bloodvessels or the
nervous and fibrous tissues ~ Those
persons whose constitutions are debili=
=tated and broken down by intemperance
or the use of Mercury or infected with
a Syphilitic or scrofulous taint are
most apt to be affected by it ~ Those
parts in which the circulation is

feeble and languid, and which on that account are but imperfectly nourished are the most liable to Ulceration, as for instance the lower extremities and parts newly formed as cicatrices, particularly of burns &c. Mortification - This is the death of the part - It may be either partial or complete, when partial as when the cellular tissue alone is involved it is termed Gangrene, When entire and complete it is termed Sphacelus - Slonghing is the separation of the dead part from the living. When the vitality of the part inflamed is distroyed or beginning to be distroyed, in the latter case the circulation becomes interrupted, pain and heat often

abate suddenly and as soon as mortification has at all taken place it gives rise to an offensive smell, the skin becomes covered more or less with vesicles filled with putrid serum, heat and sensibility of the part entirely disappear. Crepitation may be distinctly heard owing to the part containing gas, produced by the putrescence of the parts, and if they are exposed to the air they become black. — Complete death has now set in. As the parts die, and soon as complete death has set in nature makes an effort to throw them off — in the living part, near the dead inflammation is set up and the dead and the living are separated by a swelling which is red and

painful. This is called the line of "Demarcation" - This vesicates this vesicle after a time, bursts, pus is discharged from it, and a surface inflamed and ulcerating is shown this is termed the "Line of Separation" This increases in depth until the whole part diseased is thrown off by this means. In this process as in ulceration the skin and cellular tissue are first affected, the arteries and tendons resisting for some time. No hemorrhage takes place without the mortification is exceedingly rapid as it is prevented by the effusion of fibrin which occurs during the inflammation and seals up the arteries. Where the mortification results from inflammation of the

arteries then becoming ossified and converted into a ligamentous cord it is termed "Senile Gangrene." The general constitutional Symptoms are 1st if it occur in a healthy subject. When acute inflammation is in progress Symptomatic fever will be present, but the Symptoms generally are of a typhoid character. The pulse is small frequent and often irregular or intermittent. The countenance is anxious and haggard the nose pinched, and lips contracted, the appetite is wanting, the tongue is thickly coated with a heavy fur, mind becomes stupid and wandering articulation is imperfect. Swallowing is difficult. The patient becomes restless and vomiting is set in, then

is sighing hiccups and picking of the bed clothes &c, to all of these are added the almost death like coldness the clammy sweat, small and fluttering pulse and death like expression. In this state the patient often remains for some time and dies without a struggle.

Forms of Inflammation

The three principal forms into which inflammation may be divided are into the Acute, Subacute and Chronic. The 1st The acute is that which is produced by an intensely exciting cause, and is characterized by active striking phenomena, and is rapid in its progress. The subacute presents symptoms milder than the acute and not so mild as the chronic, it is

not also necessarily attended with fever as the acute. When the inflammation has existed for a long time and the phenomena become subacute it is termed chronic. The terms active and acute as applied to inflammation are synonymous. When chronic inflammation has occured in a person of weak constitution it is termed passive The acute form demands active anti-phlogistic treatment. The subacute sometimes does not require depletion at all while the chronic seldom admits of it. Inflammation may also be divided into common and specific. The 1st The common may arise from almost any ordinary cause acting on a healthy constitution as for instance a slight wound &c —

2nd The Specific, as the inflammation of Syphilis, Scrofula Bites of snakes insects &c, Another division is into that affecting the different tissues as the Skin, Cellular tissue &c. This however is not a good division as two different kinds of inflammation may attack the same tissue. There is one variety of this inflammation however, which may be spoken of this is the Phlegmonoid inflammation This is inflammation of the cellular tissue - this is the loose white tissue under the skin, covered with fat, it possesses no very remarkable property it exists for the purpose of enveloping the different organs, also as a reservoir for the fatty substance - it is composed of thin lammae and filaments

and everywhere abounds in bloodvessels and nerves. It is very liable to in= =filtration. It is subject to acute and chronic inflammation produced by various causes both local and con= =stitutional. The redness of this is of a darker hue than that of most other inflammations. The swelling is conical generally very voluminous and soft. It is not however a dange= =rous kind of inflammation. Its most common tendency is to suppuration The pus is forced out at first into the cells of the tissue, after it is poured out, the abcess generally heals by gran= =ulation. It generally suppurates in from four to five days. This is to be distinguished from consecutive abcess by the abcedment of the pain and

the parts becoming relaxed when the pus is formed.

The general constitutional symptoms of Inflammation. The nervous system is always affected owing to the intimate relation existing between the nerves and the capillaries. The Bowels are constipated the tongue coated the skin hot and dry. Pulse frequent, full and hard and in short all the symptoms of inflammatory fever.

Theory & Nature of Inflammation

All the older writers in advancing their theories of Inflammation, took for granted that the capillaries were the Essential Seat of the inflammation but it has been established from recent discoveries that its Seat is

not only in the vessels, but in the tissues itself, which tissue if acted on by any of the various causes of Inflammation, and its vitality destroyed Diseased actions are set up- one of the most conspicuous of which is to attract considerable quantities of blood, all of which actions taken together constitute Inflammation. The Blood is divided into the clot (which is composed of fibrin and Globules) and Serum - the blood globules are divided into both red and white The red are in the interior or centre of the vessels - When capillary inflammation is about to be established the vessel first dilates but afterwards contracts. Some of the red globules adhere to the walls of the vessels and become

mixed with the white, - the vessels in this way becomes choked. Inflammatory action however is not established until Exudation has taken place, before this it is only congestion. There are two principal theories in regard to Inflammation. One class at whose head Hunter stands says that Inflammation is dependent on Increased action - Another class on the contrary think that it is dependent on diminished action, that the vessel becomes so distended with blood as to be unable to perform its functions. Inflammation is neither increased nor diminished action necessarily - If in the treatment of Inflammation we should adopt the theory that it is either increased or diminished action we should be often led astray. It is neither increased nor diminished action it is disordered "secretion and function."

An

Inaugural Dissertation

On Hernia

Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the Degree of
Doctor of Medicine
By
Benjamin F. Wells

Inguinal Hernia -

Inguinal Hernia is the protrusion of any of the viscera of the abdomen through the inguinal canal. For the better elucidation of this subject I will now give the anatomy of Inguinal Hernia.

We have four muscles coming into relation with this form of Hernia, the external oblique, internal oblique, transversalis, & cremaster muscles. The fibres of the three first named muscles are so disposed towards each other as much to strengthen the walls of the abdomen. The external oblique, coming from the ribs above, is inserted by a broad & expanded tendon below into the anterior superior spinous process of the Ileum & into * the spine & front of the os Pubis, and into the linea Alba. Just above the crest of the Pubis is the External Ring, which is

* I only give so much of the insertion of the muscle as is necessary for the proper understanding of the subject.

nothing more than a split in the tendon of the above mentioned muscle at its insertion. The external portion of the split tendon is called the external pillar of the ring, & the internal portion likewise the internal pillar. The lower portion of the tendon, stretching from the crest of the Pubis to Spine of Ileum, is Poupart's ligament, the ligament is curled all along its length inwardly upon itself as it stretches from point to point of bone, somewhat, I fancy, after the curl the turbinated bones of the face take, thus forming a kind of gutter along which the spermatic cord is conveyed into the belly. The part of the Internal Oblique muscle that is concerned in Hernia arises from the outer half of Poupart's ligament, & arching over the cord, is inserted with the tendon of the Transversalis into the Crest of the Pubis, forming what is called the conjoined

Tendon of these two muscles. The origin of the Transversalis is pretty much the same as that of the Internal oblique, arching over the cord in the same manner behind the latter muscle. Then we have the transversalis fascia immediately behind the Transversalis muscle, & throwing fibres over the cord as it pushes out of the belly, constituting what is called the infundibuliform fascia. The Boundaries of the canal which runs obliquely in the walls of the abdomen from without & Backwards, Downwards forwards & inwards are in front, the External Abdominal ring, behind, the Internal Ring, above, the arched border of Transversalis & internal oblique, & below, the curved border of the tendon of the External Oblique. It remains only to describe the coverings which the protruded viscera take upon itself in its passage outwards through the Inguinal Canal. This canal is traversed

by the Testicle in its descent from the point of the Psoas muscle downwards into the scrotum. & the descent of the testis is the cause of the walls remaining permanently weak at this point, & the comparative frequency of the protrusion here. If we describe therefore the coverings which the Hernia pushes before it in its natural descent we will have described the coverings that envelop the ~~testicle~~ intestine in its unnatural descent. First then it comes down & encounters the Peritoneum, then it pushes before it the Transversalis fascia constituting the infundibuliform facia, then it goes under the Transversalis muscle, & encountering the Internal Obliqus carries down before it a few fibres from that muscle constituting the Cremaster Muscle, then pushing on Prof Robin says it encounters a few fibres intervowen between the two columns. which

he calls ~~Camper's~~ intercolumnar Fascia, lastly it encounters the superficial fascia & then the integuments. The Epigastric artery is the only one that comes in relation to this form of Hernia. There are two varieties of this Hernia the Oblique & The direct. In The oblique the Intestine follows the course of the cord, we have described already the coverings of this Hernia. The Epigastric artery always lies to the inner side of this form. In the direct it always lies to the outer side of the protrusion. I will now describe the coverings of this latter variety. It comes directly through the external ring pushing before it the opposing walls of the abdomen. 1st it encounters Peritoneum, 2ndly conjoined tendon of the internal oblique & Transversalis muscles. 3rdly intercolumnar fascia. 4thly Superficial fascia. & lastly-

The integuments - Various names are applied to these forms of Hernia according to the position they occupy. The relation of the Hernia to the sac, or the particular viscus that happens to be protruded. Thus we call it Scrotal if it occupies the Scrotum, if of small bulk & occupying the space between the two rings thus simulating a bubo in appearance a Bubonocele - If the viscus protruded is omentum alone the Hernia is called an Epiplocele. if intestine alone Enterocele, if both intestine & Omentum Entero-Epiplocele - Congenital Inguinal Hernia is that variety in which the intestine lies in the same sac as the testicle in the Scrotum, the cavity of the Tunica Vaginalis never having been closed. Encysted Hernia, when the adhesion of the Tunica Vaginalis being imper-

fect, a loop of intestine in its own sac is pushed down into the cavity of the Tunica vaginalis, so that the Surgeon in operating has to divide three layers of tissue. We have again nomenclature resulting from the comparative ease with which they can be returned into their natural situations. Thus we have the reducible & the irreducible; from the comparative ease with which their contents can be transmitted & their blood be circulated, strangulated & non strangulated. The indications in the treatment of reducible Hernia are to reduce the Hernia & To wear a well contrived truss, the first object is accomplished by what is called taxis. The method of performing this will readily suggest itself to anyone, who considers for a moment the nature of the parts protruded & the direction

of the canal through which they are
to be returned. With relation to the trusses
various kinds are in use with variously con-
trived pads - some hard, & some soft. When
a radical cure is aimed at the hard
pad is generally worn & it very often ac-
complishes its object - This improvement
in surgery was made by a laborer of Ken-
tucky, who while ploughing being much
annoyed with an old hernia, fashioned out a
woodden pad & applied firmly to the part
with a compress. After having worn it
for some time a radical cure was ac-
complished in his case - Prof N. K.
Smith has lately devised a truss, which
he thinks will prove more efficient than
any other in the cure of radical hernia.
The Pad is composed on the outer bor-
der of a copper ring so hollowed
out & contrived as to admit of a

threatening the life of the patient, the most prominent among which are the stoppage or cessation of the alvine evacuations & the vomiting of faeces. The whole system sympathizes to a remarkable extent with the disorder as we might be led to expect. The gut if not relieved will undergo all the changes from simple engorgement to the mortification of the parts. The predisposing cause of Hernia is of course some weakness in the walls of the abdomen at some particular point. In the case of Inguinal Hernia this weakness is owing to the descent of the testicle as before stated. The exciting cause is any thing which acts on the moveable viscera in the abdomen to push them through its walls. The muscles of the abdominal walls themselves are made to act in this way by a chronic cough, violent & often

repeated efforts at stool, straining & lifting at heavy weights, the wearing of a belt around the body, so as to constrict the viscera & push them down in the cavity of the abdomen, is a very common cause of hernia among the Russian Soldiery. So common indeed is this disease among them that the existence of it is not reckoned a bar to their ~~further continuance in office~~ remaining in the army as it is in other countries. Inguinal Hernia when it becomes ~~strangulated~~ is said to be acute or chronic, according to the degree of the constriction & the urgency of the symptoms. When we encounter difficulties in returning hernias there are various expedients resorted to. Chloroform is generally at first administered in order to relax the parts & increase the size of the opening

through which the gut is to be returned,
it is very efficient for that purpose,
& has supplanted all other relaxing
agents. Cold used to be employed in
difficult reduction by Prof Dorridge
who said that he rarely encountered
a hernia which could not be re-
duced by this means. It acts in two
ways by contracting the muscular fibre
investing the testicle & thus effect-
ing taxis; & by reducing the size of the
constricted gut by expelling the blood
therefrom & thus making it easier
to be returned. Prof N. R. Smith
recommends that these two agents be em-
ployed in conjunction in very difficult
cases. The latter named gentleman
has in contemplation to practice, what
seems to me a very ingenious expedient,
in cases ~~which~~ where reduction

has failed to be affected by the ordinary mode. It is this, cover the abdomen with a quadpliable piece of leather quite down to the external ring and then have strings sewed all around & sticking out from its circumference, as seen in the figure, plastering this over the abdomen with some adhesive substance with two or three of the assistants seize the strings, and lift by this manipulation the walls of the abdomen. There will then be created within the cavity of the belly a vacuum & the external air acting on the ~~external~~ tumor with great and equable force will drive it up- Acting on the principle of what is called in common parlance suction. If every thing fails the operation is to be resorted

to - In performing this operation the anatomy of the parts is to be carefully borne in mind, The coverings in the immediate vicinity of the sac should all be opened by means of the director - The sac is opened in all cases. At this stage of the operation says Prof. Smith you run your finger up along the direction of the canal and endeavor to insinuate your ~~finger~~ nail under the constriction, having done this you carry your bistoury along the finger in such a way as to avoid cutting the parts, ~~un-till~~ insinuating it between the constriction & the finger, & turn its cutting edge upwards & inwards ~~and~~ making the nick parrallel with the epigastric artery. A very slight nick will suffice so that no one but a very careless or reckless operator would ~~nick~~ cut that artery -

Inguinal Hernia may be confounded with Hydrocele, Varicocele, or the lodgement of a testicle in the inguinal canal may be mistaken for a hernia in that region, a careful attention to symptoms & the history of the case will enable us to make out our diagnosis with certainty.

Heart Disease

John Daily aged 25 occupation sailor entered the Baltimore Infirmary April 16th 1858.
He gave the following history of himself, that about two years ago, after exposure to inclement weather, while on ship board, he was suddenly attacked with acute rheumatism, and having no medical aid at hand, he was obliged to allow nature to heal his disease without assistance. The man recovered after a few weeks, and has enjoyed good health until about two months ago when he was attacked with paroxysms of shortness of breath aggravated by the least exertion, and oedema of his feet, which finally extended all over the lower extremities. When he entered the Infirmary on the 16th he presented the following symptoms, great difficulty of breathing, a slight cough, and oedema of the lower

extremities, his pulse was a hundred and forty in a minute, and irregular, moist sounds were detected all over his chest both anteriorly and posteriorly; the cause of these sounds were evidently owing to congestion of the lungs, allowing serum to be exuded which gave rise to them, on listening to his heart a bellows murmer could be distinctly heard with both sounds, his heart was also greatly hypertrophied as was shown by the unnatural situation of the point of impulse, for instead of pulsating about two inches below the left nipple, and an inch inwards towards the sternum, it was seen and felt pulsating at least three inches below the point named above, there was also a greater extent of dullness than there

is in health. The Indications for treatment in this case were to quiet the action of the heart, to relieve the congestions of the kidneys and thus to carry off the oedema of the lower extremities. To fulfil these purposes the following was ordered

℞ Pro. Chlo. Hydrag grs xx

Pulv Digitalis grs xx

Pulv Rad. Squill grs xx

Ft pillulae xx, one to be taken three times a day, he was also ordered a solution of bi. tart potassa as a drink through the day. Under this treatment the oedema rapidly disappeared, the kidneys sometimes secreting as much as gallon a day, his other symptoms were mitigated also to a slight degree his pulse was reduced and his breathing became

less laborious, of course we had no idea of curing him of the disease, but by palliating his symtoms, we might thereby relieve him somewhat from the great amount of suffering, which he had to endure until death either sooner or later ended his life.

The same treatment was persevered in for a little more than a week, at the end of which time the Mercury was discontinued and assafoetida substituted in its place, the bi tart of Potassa was also suspended. This patient remained pretty nearly the same for a fortnight, some days he would be better and then again he would be worse; at the end of two weeks he suddenly became worse, his symptoms were greatly aggravated his breath

ing was so difficult that he was unable to lie down, his pulse increased and it was exceedingly irregular, the oedema also returned, but not to such an extent as it was at first, the digitalis was now ordered to be given every four hours, but it entirely failed to afford any relief to his suffering. One day while at stool he suddenly expired, his heart for two or three days previous had been very intermittent, and probably during the exertion of evacuating his bowels, the diaphragm was forced upwards, interfering with the contractions of his hypertrophied heart causing it suddenly to cease beating, and from extreme debility it failed to renew its contractions.

A post mortem examination

found all the valves healthy except those of the Aorta; the heart was very much hypertrophied, being three times as large as natural, the semilunar valves of the aorta were little changed, but on the inner side of the artery above the sinuses of of Valsalva a great quantity of cartilaginous substance was found, which had become ossified, the aorta was also very much dilated.

Pleurisy

To [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] August [illegible]

He gave the following statement, that on Monday July 19th while he was [illegible] at his work, he was suddenly seized with a violent lancinating pain in his right side, which was followed by a [illegible] febrile excitement, on the next day not being much better, he sent for a physician who prescribed for him, and the course of two or three days, he felt considerable relieved, not well enough however to resume his duties, he continued on in this way for a week, not perceiving much change except that he had a little difficulty in his breathing, especially on making any exertion

and also that he had a slight cough. When he entered the Infirmary he presented well marked symptoms of a large effusion in the right side of his chest. His general condition was very bad, he was exceedingly weak and emaciated, his pulse was quick and small. his skin had a tendency to cold sweats, he was also suffering from some days pneu; although he had a pretty large effusion, none of his organs viz. (with the exception of his right lung,) the heart liver stomach or spleen were displaced to any appreciable degree. Percussion gave complete dullness in the right side of his chest both in front and behind, the dullness was appreciable

as high up as the seventh rib when he was in a sitting posture, it however varied according to his position, as for instance when he was lying on his back percussion sound was tolerably clear on the anterior part of his chest, but in the lateral region it was absolutely dull; On applying the ear to his chest bronchial respiration, and aegophony were distinctly heard in the diseased side; the first of these sounds was caused by the lungs being compressed upon itself, rendering its substance dense and firm and thereby more readily conveying the vibrations of the bronchia to the ear, the latter sound which is only a modification of bronchophony was

produced by a thin stratum of lymph being intervened between the condensed lung and side of the chest, and the voice in passing from the compressed lung causes this stratum of lymph to vibrate and in doing so it acquires the striking character of aegophony.

From the condition of this patient, in being extremely weak and debilitated, and an impaired appetite, it was deemed expedient, to improve his general health if possible, before we attempted to produce absorption of the effused liquid. He was therefore ordered cod liver oil and good nutritious diet. After taking the cod liver oil for a week his ap-

fetida was better, and he seemed to be improved; he was then ordered the following

℞ Pulv Digitalis gr i
Pulv Asafoetida gr i
Pulv Squillae gr ij
Oil of Juniper gtt ½
M pill. One to be taken

three times a day, the cod liver oil was also ordered to be continued. Under the above prescription the effusion was gradually began to be absorbed, and he seemed to be improving his skin which was previously cold became warm and moist, his difficulty of breathing was less laborious. On the 12th of August the oedema had entirely disappeared

bronchial respiration was also less distinctly heard, vesicular murmur had began to take its place in the apex of his lung. On the 14th he was not so well, he was suffering from a violent sick stomach he also complained of pain in the region of his heart, for the sick stomach he was ordered to have a mustard plaster, and it had the desired effect of relieving him, the pain in his heart was relieved by a blister. On the 20th his prescription of digitalis ~~asa~~ fœtida &c was discontinued, and the following was ordered.

℞ Mass Hydrarg
Nux Vomica
Ext Aloes āā grs
H pill. One to taken

three times a day the use continued for
a week at the end of which time it
was discontinued. Its use being no longer
required, he was again put on cod liver
oil, under which he rapidly improved.
He left the house on the 8th of Septem-
ber entirely well.

Fracture of the Cranium

Joseph Johnson, a negro man aged 23 yrs, entered the Baltimore Infirmary on the 9th of September 1858, suffering from fracture of the temporal bone, near its squamous border, he received this injury from a spike flying from the cylinder of a threshing machine whilst in full motion. The spike was disengaged doubtlessly by the unseen entrance of a flinty rock. He presented the following symptoms, great pain in the head, tinnitus aurum, subsultus tendinum, and loquacious delerium, pulse ranging from 80 to 90 beats in the minute. He was ordered to have a blister applied to the nape of his neck, and also one behind each ear, he was also ordered to have his bowels freely opened. This treatment seemed to mitigate his symptoms for a time, but it was of a short

duration, all of his symptoms very soon again became aggravated his delirium was wild and incoherent his pulse became exceedingly weak and irregular, and his skin was covered with a cold clammy perspiration, he remained in this condition for several days and finally died on the on 29th of September just twenty days after his entrance.

Post mortem examination

Upon holding a post mortem examination, we removed the top of the skull & discovered a large portion of bone pressing upon the dura mater, also several small pieces of bone driven midway into the substance of the right lobe of the cerebellum. There was

a considerable amount of extravasated blood and serum between the walls of the cranium and dura mater, also a false membrane thrown out between the dura mater and arachnoid, & some extravasation into the brain itself. Softening had taken place to a considerable extent around the wound and neighbouring parts.

We think trephining in this case would have been of little or no avail having that the spike had penetrated an inch and a half into the substance of that delicate organ (the brain) the natural conclusion was that fragments of bone were driven before it and lodged therein. To have removed these was totally impracticable as the irritation unavoidably produced would have been greater, than the fragments of bone would be productive of.

Dysentery

Mary Conner aged 20, occupation seamstress entered the Infirmary August 15th 1858, labouring under Acute Dysentery. She stated that about a week previous to the attack, she caught a violent cold, and in a week from that time the following symptoms presented themselves, great pain in her abdomen, frequent desire to go to stool, and considerable straining, her stools consisted of blood and mucous. When she entered the Infirmary on the 15th, the above symptoms were still present, and in addition to them she had a high fever her pulse ranging from a hundred and twenty to a hundred and twenty five beats in a minute, her discharges were small and very numerous, amounting to fif-

teen, and sometimes twenty in the course of twenty four hours, her tongue was thickly coated, with white fur. Prof. Frick prescribed the following prescription.

℞ Acetas Plumbi grs xxiv
Pulv Opium grs iv
to be made into eight pills,

and one to be taken every three hours, she was also ordered an enema of thirty drops of laudanum in two ounces of starch water, on the following day finding these pills to be of no avail in arresting the discharges, she was ordered the following. ℞ Tannic acid grs iv
Pulv Opium grs
ft pill one every two hours.

Under the above prescription, she began to improve very rapidly, her discharges were less frequent than

they were before, and not so much blood in them, her pulse diminished to ninety four beats in the minute, less pain in her abdomen, and her desire to go to stool was not so frequent, her tongue became cleaner, and she seemed to be greatly improved; the pills were now ordered to be given every four hours, she was also allowed to have some wine and arrow root. This patient continued on improving under this treatment, for more than a week, at the expiration of which time from some cause or other, (we hardly knew what it was) she was suddenly thrown back nearly as bad as she was at the beginning of her disease, her evacuations became more frequent, and they consisted now principally of mucous, scybula, and a small quantity of blood, the pain and soreness in her abdomen returned, her tongue again became furred, her

urine was scanty, and she seemed to be a good deal prostrated; Prof Frick thought now that probably the discharges were kept up by these scybala, ordered her a large enema of flaxseed tea, and if their was much pain and straining this was to be followed by one of starch and laudanum; the flaxseed enema relieved her somewhat, but her discharges still continued about the same; the above prescription of tannin and opium was now discontinued, and the following was ordered.

℞ Pulv Nux Vomica gr i
Nitras Argentii gr ß
Pulv Opium gr ¼
ft pill one to be taken

every four hours, she was also ordered chicken broth, and wine. These pills seemed to act

like a charm, in less than two days after they had been prescribed. their was a decided change for the better, all the pain and soreness in her abdomen entirely disappeard, her discharge became less frequent, and they were of a better character, her skin which was previously hot and dry now became moist. After taking these pills for a week they were suspended for she had so far convalesced as to require the use of them no further. She left the house on the 6th of September entirely well.

Rheumatism

Robert Jones aged 30 occupation house servant entered the Balts Infirmary on the 25th of March 1858. He gave the following statement, that on the 24th of March while in a profuse perspiration, he suddenly exposed himself to cold and damp weather, and on the following night (24th) he was attacked with a slight pain and stiffness in all his joints, which however did not prevent him from sleeping, but on the next morning instead of being better as he expected to be he found that he was getting worse.

When he entered the Infirmary on the 25th he presented the following symptoms, violent erratic pains in his joints and limbs, he was not able to move himself in the least without experiencing great agony, he had a high fever, quick and tolerably strong pulse, tongue furred

his urine was scanty and high coloured, bowels constipated, his heart was examined, and it was found to be perfectly healthy, though it was acting exceedingly irregularly. He was ordered the following prescription.

℞ Bi. Carb. Potassæ grs viii
Pulv. Guiacum grs v
Pulvis Doveri grs iv

Made into a powder, and one to be given every four hours, also ten grains of Dovers powder at night. For the first three days this patient experienced little or no relief under the above prescription, his symptoms instead of abating were somewhat aggravated, the pain and soreness in his limbs became so much worse, that he could scarcely bear the weight of the bed clothes, the joints of his knees and ankles were

swollen to a considerable extent, and were exceedingly sensitive to the slightest touch, his pulse also was slightly increased, being now a hundred and twenty in a minute, his urine as to its quantity was somewhat more abundant, the quality of it though remained the same.

From the changeable nature of this patients pains, being sometimes more severe in one joint than another, led us to be very careful in examining the condition of his heart every day in order that, if the disease should be transfered to that important organ, we might at once commence with active treatment, for we know when the heart becomes diseased, it will most assuredly baffle all our skill, unless it be detected early and treated accurately, and even then our

treatment will often fail to arrest its progress. After persevering with the same treatment for a day or two longer there was a decided change for the better in this patients condition, his pains became less severe, the swelling and soreness rapidly disappeared, his urine was more abundant, the kidneys sometimes secreting as much three quarts a day, his appetite returned, and he gradually recovered. He left the Infirmary on the 15th of April entirely well.

Pneumonia

Peter Willet aged 22 occupation tailor, entered the Infirmary February 3rd 1859.
Peter gave the following account of himself that on friday the 22nd of January while engaged in assisting, to put out a fire, he got very wet, and remaining in this condition for several hours without changing his clothes, brought on a violent cold which he paid little or no attention to, and on the following friday (29th) he was seized with a chill, and pain in his back and limbs which was followed by a high fever, and profuse perspiration. When he entered the Infirmary on wednesday February 3rd he presented the following symptoms, a short and suppressed cough, respiration hurried pulse frequent and weak, tongue furred

skin hot and dry, and he also complained of a dull pain in the posterior part of his chest which was increased by coughing, or by a deep inspiration, he seemed to be a good deal prostrated; percussion sound gave complete dullness over the posterior lobe of his right lung on listening to his chest bronchial respiration and bronchopony were detected, fine crepitation was also distinctly heard, especially when he took a deep inspiration, indicating that though the seccond stage had commenced the first stage was still present. He was ordered the following

℞ Calomel grs x viii
Opium
Ipecac āā gr iss
Ft pillulae vi one every four

hours, he was also [illegible] the following

℞ [illegible] Acacia ℥i

Syrup ℥ß

Aqua ℥vij

Antimony Grs iv

Ft Sol. desert spoonful [illegible] hours, and gradually increased to a table spoonful three times a day. After taking the above prescription for two or three days, there was a considerable change for the better in this patient's condition, his respiration was easier, and the pain which he complained of on entering the Infirmary entirely disappeared, on percussing his chest dullness was still present on the diseased side but not to such an extent as it was at first.

On the 1st he was still improving, [illegible] tion, and dullness were less distinctly marked; the pills of calomel & [illegible] pended, the other treatment was [illegible] ed to be continued with the addition of a blister to the lateral region of his chest. On the 9th he was still improving, and the active stage having passed he was ordered the following stimulating expectorant prescription

℞ Senega
Eupatorium
Liquorice [illegible] ʒij
Aqua bullient ℥i. [illegible]

spoonful between every two doses of tartar emetic. Under this prescription he was much improved. Feb 10th. This patient

was in a fair way for recovery he said that he felt better than on any previous day of his disease.

For want of time I am compelled to hand in this case before its termination but unless some accidental lesion should arrise there is every reason to believe that he will entirely recover.

FROM 1811 THROUGH 1887, EVERY CANDIDATE FOR THE M.D. DEGREE FROM THE UNIVERSITY OF MARYLAND WAS REQUIRED TO SUBMIT A DISSERTATION. MOST OF THESE HANDWRITTEN DISSERTATIONS ARE PRESERVED IN BOUND VOLUMES IN THE HEALTH SCIENCES LIBRARY.

An
Inaugural Dissertation
on "Fractures,"
submitted to the examination
of the
Provost, Regents, and Faculty of Physic
of the

University of Maryland,
for the
Degree of Doctor of Medicine.
by
Thomas J. Wheeden
of Baltimore Md.
Anno Domini
1839.

What a piece of work is Man! How noble
in reason! how infinite in faculties!
in form, and moving, how expreſs and
admirable! in action, how like an angel!
in apprehension, how like a god! the
beauty of the world! the paragon of ani-
mals.

Hamlet.

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Hamlet.

Fractures.

The Bones, Cartilages, and Ligaments, form the framework of the human system. The use of this framework is to give form to the body, to support the soft parts in their proper positions, to protect some of them, and to allow motion of one part upon another.
To fulfil these requirements the frame must be very strong, of sufficient size to admit the attachment of the numerous soft parts, yet very light; it must be composed of many pieces, very strongly united, yet in such a way as to allow the desirable motions, with the least friction.

I know not which to admire most — the perfection of the bones, the elasticity of the cartilage, or

the strength and beautiful arrangement of the ligaments.

The bones are adapted to their purpose by their composition, form, and being hollow.

They are composed of two substances; one soft, the other hard. The two, and their nature, can be easily perceived if two similar bones be placed, one in fire, and the other in some diluted mineral acid. In a short time, if taken out, though both have the same form as before, one will bend, indeed may be tied in a knot, the other will crumble like chalk, the acid having removed the hard or earthy portion, and the fire destroyed the softer or cartilaginous portion. The form of each being the same as before the experiment, it will be seen that the hard and soft parts are intimately

blended throughout the bone).
(Sometimes, by disease or some cause, the hard part is removed from the bone during life, and the bone thus affected will bend in any direction, and people will say the bone is gone.)
The proportions of the two parts to each other vary much under different circumstances.
In earliest life the soft parts only are found; at a certain time, a few particles of the hard part are deposited in one of the several points of the soft part, called "points of ossification"; additions are then made, till throughout the soft part the hard part will be found, but in very small proportion; this, however, is gradually increased by fresh additions, till at last the bone has sufficient strength to bear the weight of the child.

The hard or earthy part continues to increase till old age, in mature years giving the bones the greatest degree of strength, and in advanced life making them extremely brittle.

In some bones the deposit is made much earlier and more rapidly than in others of the same body.

In some children also than in others.

These statements will account for the bones of children bending easily and breaking with difficulty, while those of old people break easily and do not yield to pressure.

The predominance of the soft part is also one reason why, if the bones of children be broken, they unite readily, while in old people the predominance of the earthy part retards the progress of restoration, and sometimes prevents it.

The subject which I propose

to treat of is Fractures, or solutions of continuity of bone.

The human skeleton is devisible into five portions. 1st. The vertebral column, or the central axis, 2nd. the head and face, or what is called the superior developement of the central axis, 3rd. the hyoid arch, 4th thoracic arch, and upper extremities, and 5th, the pelvic arch and lower extremities. Then to take the bones we may divide them into three classes - 1st the long bones, 2nd. the flat, and 3rd the irregular. The long bones are principally those in the limbs, and they consist of a shaft and two extremities. The shaft is cylindrical or prismoid in form, very dense, and hard in texture, hollowed inside into a canal which is filled with a medullary substance. The extremities

are broad, to articulate with adjacent bones. The heads of the bones are cellular or cancellous in their structure — which is capable of bearing a great weight.
The flat bones are those which are composed of two layers of dense bone with a cellular structure intervening — such as the bones of the head, Sternum, ect: cet:
The irregular bones are those that compose the vertibral column, the sacrum, the metacarpal, and metatarsal bones.

The causes of fracture may be divided into - predisposing, and exciting. The predisposing causes are such as render the bones more liable to be broken. For example - old age. - Here we have a deficiency of animal matter, and the bone loses its elasticity and becomes brittle.
Some people have very brittle bones, without any satisfactory cause - called <u>orignal</u>

conformation.

The exciting causes may be divided into two classes. First "Mechanical", & Secondly - "Muscular contraction".

Mechanical violence may be direct or indirect - It is said to be direct, when a bone is broken from an immediate contact with a resisting body; as by a blow upon the ribs. It is said to be indirect, when the force is applied to the two extremities of a bone, and when it gives way between; for instance, a person getting the lower part of his leg between two pieces of timber, and falls forward. Here we have two forces acting against each other; the upper part of the body acting as a lever, the timber being the fulcrum. - the bone being acted upon by the two forces is snapped off between.

The bones most commonly fractured by muscular action, are the Patella, and Olecranon, but any of the others may be fractured in the same way, if they be deficient of animal matter. A person falling from a height, suddenly, may receive no injury to his bones; because he does not expect the fall, and therefore does not brace himself up. But if he expects the fall and has time to make this preparation, he is likely to come off with a broken leg, or a dislocated hip.

Fractures are divided again into "Simple", "Compound", & Combined. By "Simple fracture" we mean a mere fracture of the bone, without any material injury to the soft parts. A "Compound fracture" is an injury in which the bone is broken, and the

sharp point of the bone piercing the skin, thus making the wound communicating with the external atmosphere. A fracture may be rendered compound by the same injury which broke the bone; or the bone may be forced through the skin. Sometimes sloughing and ulceration may supervene from a simple fracture, and thus convert it into a compound fracture.

"Compound Comminuted Fracture", is a fracture of the bone in several places, and when one of the fragments passes through the soft parts.

"Compound comminuted fracture in the upper two thirds of the thigh", always demands amputation."

The Prognosis of a fracture depends entirely upon the amount of injury. If there be much shock to the nervous

system, with the loss of a large quantity of blood, it may prove fatal in a few hours, or if excessive inflamation with suppuration, we may expect Tetanus, Hectic, or Typhoid fever.

If we have "compound combinuted fracture" of either of the bones about the knee-joint, with an opening extending into the joint, Amputation above that joint, is indicated; particularly if in an old person of debilitated constitution.

The wound, which characterizes the compound fracture, is of great importance in respect to the difficulty of the cure; for there may be violent inflammation set up in the part, which may cause violent suppuration, or gangreen, without any remarkable local injury, from the effects of

endanger his life? The next question which arises is, whether amputation should be primary or secondary? Primary - that is, within the first forty-eight hours before fever and inflammation have set in. Secondary - that is, delayed until inflammation has subsided, and suppuration is established.

Primary amputations are decided to be preferable to secondary; but we should not be too eager to use the knife directly after the injury. If we have a patient in a collapsed condition, with a low pulse, cold skin, or the symptoms of extreme collapse, we must revive him by cordials, and applying warmth. At the same time we must keep an eye to the part for fear of "hemorrhage".

If the patient be restless, and asks for the operation, it is best to comply with his wishes; for the operation will not do him as much harm, as the pain. Under such circumstances we should not hesitate to operate.

The process by which Nature repairs a broken bone, is very beautiful, and deserves a minute's attention. When a bone is broken transversly, and the broken ends can be kept in apposition, it will unite by the first intention: but if from some cause, the bones cannot be kept in apposition, union takes place quite differently.

After a fracture there is more or less blood poured out in the surrounding tissues. Gradually this blood is absorbed, and "lymph" is deposited above and below, in the angles that they

ragged periosteum forms with the bone. Gradually, the superior and inferior portions of the calis, meet and form a complete capsule, encircling the fractured extremities. This is generally complete, in from two to three weeks. In from two to three weeks more, this provisional calis ossifies: then the use of the bone is restored. But, at the same time, the broken bone has not united, and if the calis were removed, the extremities would fall apart. In five or six months, ossific matter is deposited, then the provisional calis is absorbed, and the limb is restored to its natural function, if there be no shortning.

The clavical, and ribs, are the two classes of bones that are most likely to unite the provisional calis, because it is not in our power to keep them at rest.

But there are some bones when fractured which never unite with the provisional calis, such as the bones of the cranium, "neck of the femer" within its capsule, or any portion of a bone, that is invested in a synovial membrane. For it would be a very bad thing to have such a tumor on the internal wall of the cranium pressing upon the membranes of the brane; so also would it be to have it developed in a joint.

The repparation of a fractured bone, depends upon the age, constitution, and peculiar circumstances of the patient. If the vital powers are exhausted by debility, or the systym is under the influence of any disease calculated to deprave the constitution, such as Syphylis, repparatim will be retarded.

Pregnancy is said to retard ossification, and it is plausible enough, for if the nutritive powers be occupied in the development of the fœtus, there certainly would be delay in the process of ossification.

The symptoms of a fracture, are three. 1st. Deformity – such as, bending, shortning, or twisting of the injured limb. 2ndly. "Preternatural mobility", i.e. one end of the bone moving independently of the other. 3rdly. "Crepitus", or a grating, which is heard and felt when the broken ends are rubbed against each other. But it must not be forgotten, that if the broken ends are displaced, they must be drawn into their natural position; otherwise no crepitus will be detected. In addition to these symptoms, there will be more or

by pain, swelling, and helplessness of the injured limb.

It is important, in every case, to know the causes which produce displacement and deformity after fracture, because it is necessary to counteract them during the treatment. There are three — First, "muscular action", 2nd. "the weight of the parts below", which, for instance, causes the shoulder to sink downwards when the clavical is broken. 3rd. The "original violence" which causes the fracture as when the ossa nasi are driven in.

The indications of the treatment of fractures in general, are, first to get the parts in apposition, to maintain them thus, and to procure reunion. To do this, we must enforce perfect rest. 2ndly. to prevent deformity.

To do this, we must use splints, and supports. To obviate displacement by muscular contraction, we must endeavor to place the limb in a position to relax the muscle or muscles that caused the displacement; as in fracture of the upper end of the radius, the elbow must be bent to relax the biceps; and in fracture of the Olecranon, the arm must be very nearly extended; By doing this we carry the lower fragment to the upper, which has been carried up by the Biceps.

We must make extension and counter-extension, by mechanical means, as the case may require.

In reducing a fracture, we must hold the upper part of the bone steady, while the lower end we draw in a direction to replace the parts.

The extension should be made gradually, gently, and steadily, so as to overcome the spasmodic contraction of the muscles; otherwise it will only aggravate that which we wish to obviate.

The bone being broken, it is evident that it is no longer able to fulfill its office; therefore the indications are, to use some mechanical support to take the place of the bone. This we get from splints. They preserve the natural shape and length, and also prevent motion at the place of fracture. Some splints are simply a straight piece of wood, made the required length to extend above and below the place of fracture. Others are wood carved so as to fit the limb snugly. They must

be padded so as to prevent pressure at any point. There is the "Starched Apparatus", which is an excellent contrivance for simple fractures of the leg. With the support of this apparatus the patient may be permitted to leave his bed at the end of three weeks. To apply it, I would proceed thus: Take a stiff sheet of binder's board, and cut out two pieces, one for each side of the leg, as near the shape of the foot and leg, as possible. Moisten these in boiling water; then bedaub with starch; wrap each of them with a bandage, & apply them to each side of the leg. Then take another bandage, and wrap the whole snugly, so that the bandage by its pressure shall adapt them

to the shape of the limb while it is set. Then let the patient be kept quiet for about a day, until it gets hard; then it will afford a accurate support to the limb.

There are also various other apparatus, - such as "Liston's", Desault's, Fergusons, Hagedorns, Fracture-boxes &c.

But there is the "Anterior Splint", which I think is superior to any of them, in every respect. It is less complicated than any of them, cheaper, lighter, and we can use the same splint in different cases, and can adapt it to fit any one. In case of a compound fracture, we can dress the external wound without removing the apparatus. I believe that a patient will

experience more comfort in this apparatus than any other. Another advantage is, that it can be made in a few minutes, by almost any one that can use a hammer without mashing his fingers. It is made thus:- Take a piece of stout wire and bend it in the shape of a long parallelogram about two and a half inches wide, and of sufficient length to reach from the ossa ilium to the toes, when bent. Place two pieces of wire across from one side to the other to strengthen it. These pieces must have rings attached for cords, and are movable from one part of the splint to the other.

Now suppose we have a patient with a fracture of the "shaft of femur". - we take the wire parallelogram above

described, and bend it to fit the angles at the ankle, at the knee, and in the groin: We then wrap this in a bandage, and lay it along the anterior surface of the limb. Take our adhesive strips, - apply one around the thigh, one above and below the knee, one at the ankle, and one around the sole of the foot. We then suspend the limb from the ceiling, by means of the cords through the rings on the cross pieces. Next apply bandages from the toes, (leaving the heal out) up to the pelvis. We then have the limb reposing on a surface completely adapted to its shape, each successive turn of the bandage forming a new loop of support.

To heal the wound of a "Compound

fracture", a piece of lint saturated with the blood, is the best application.

We should bandage the splint above and below, without covering the wound; then have an independent bandage to cover it, so as to have free access to the wound without disturbing the splint. If inflammation supervene, use antiphlogistic means to subdue it — loose the bandage, and apply cold, if agreable to the patient. Use now and then, a gentle laxative, keep the parts clean, and avoid the accumulation of matter. If it inclines to burrow, slit up the sinuses, and discharge it. Care should be taken not to carry the relaxing agents too far, for fear of reducing the patient too much. Sometimes, regardless of our endeavors to save the limb, the patient is inclined to sink, then we should resort to Amputation.

An

Inaugural Dissertation

on

Histology.

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland,—

for the Degree of Doctor of Medicine.

By

George Mentz.

1859.

Histology.

— Fairy-tales of Science,
And the long result of time. Tennyson.

Histology — ἱστος - λογος — signifies properly the anatomy of tissues: and anatomy, however, having special reference to the tissues in disease, is termed pathological or morbid anatomy. Histology proper, confines itself solely to the tissues in the state of health. It recognizes their peculiar structure and forms; traces their origin; notes their relations and uses to the human economy. There is

something

something fundamental and sure in this!'

Chemistry only goes one step further, when it resolves with delicate analysis their elemental composition.

As a science, Histology is wholly microscopical; to microscopy it owes all that it is; and the student can appreciate thankfully the laborious devotion and carefulness of those patient investigators who, assisted by these means, have wrested from secreting Nature the deep meanings, the emphatic explanations, and the grand truths, which are embodied in Histology. By its aid has not only old Physiology been explained, reformed, extended and enriched; but new Physiology been constructed and verified.

verified. Indeed, physiological science should have been sequent to, as it really is the deduction of, Histology.

It may not be amiss to answer the question: What is Tissue?, by saying, a Tissue is the cell perfected — the last, perfect result of that complete system of causes which being started in the fecundated germ, is thence and there propagated through mysterious change into subtle vital connections, and culminates in the production of a proper-typed organism. That organism, also, is endowed with the same vital impulse which originally was the forming power, — in other words, the vital necessity is transfered

transfered, not terminated; so that, the thing formed must contain within itself, first, the original life-act; and, second, the peculiar elements acted on— but these reinforced, diffused, elaborated and combined. So, I say, tissue is the cell in ultimate elaboration. What, indeed, is the entire physical being but a compound and perfect cell which delegated powers render capable of self-reduplication?

The simplest Type of organized life — the organic basis — is the cell, a microscopic sack composed of an extremely attenuated, elastic, transparent membrane, and ovoid or spherical in form (note 1)

In

(1) "The elementary shape of all cells in all existances, is spherical, and the motion, rotary".

In the center of the cell, or adhering to its wall, is to be seen what is termed its nucleus, which again may contain a simple body or granule known as the nucleolus. The cell floating, or being imbedded, in a positive and essential elementary substance, the matrix, undergoes certain changes corresponding to its organic impress, being regulated or modified according to its systemic place or destination, — but becoming, undoubtedly, endlessly self-productive, and evolving perfectly homogeneous products.

We recognise three sets of cells which appertain to three periods of growth in the course of creature-development. The first class occupy the

the fœtal circulation, appearing coincidentally with the formation of the heart.

The second set is constituted of the chyle-particle, appearing at the period of chylification. This set is continued permanently through life, and becomes eventually the true red-blood cell of the third class. "The cell of the first period is white, spherical, nucleated; that of the second, red, disc-shaped, and nucleated; that of the third, red, disc-shaped, bi-concave, and non-nucleated." (note 1) I do not think it requisite to describe these cell-transitions more particularly or extendedly. Suffice it if I point out the fact and say that the foregoing process describes the type-method

(1) Draper. Physiology. p. 115.

method of a law which obtains universally among all existances: namely, that in all organic formative processes the cell is the basis; and that the organic impress it receives determines the sort of tissue or creature which shall result. Hence, in like manner, result all tissues whatsoever; and thus, ascending the scale of life, we find, that from the sole and single ovule comes at last the complex human structure bearing, crown-like at its summit, the ever inscrutable soul!

The properties of tissue, we say, are vital, chemical and physical. Vitality is the essential condition, that property which

which is antecedent to creation and act, and through which the other properties become efficient; which eludes separation and analysis; whose action is the sole proof that it is. Bichat has defined life to be "the aggregate of the functions which resist death"; but this definition can only refer to our perception of life. For, life absolute, is ideal; its expression only, or life concrete, is sensuous — as thus, only, is life perceived. Not so as regards chemical and physical qualities: if we removed life, we may still perceive these; for we can analyse the one, and demonstrate the other. I might express the matter thus:— As the chemical basis is to physical phenomena, so is

vitality

vitality to their dynamic consociation.
That is to say, abstract vitality, and
you seperate that force which induces
and effects their conjoint normal
and physiological action. With such
abstraction, the equilibrium of the forces
concerned in this action, will have been
certainly infringed upon; their injury
will be displayed in diminished integrity
of action, then in functions which are
termed abnormal, and finally in
complete cessation of all action and
function. And when this finality is
so entire and direct as to intrude upon
our recognition the total absence of
those phenominal exponents of vitality
most familiar to the senses, we are

Conscious

conscious of a condition so diametrically opposite and unlike that accompanying life, that we instinctively search for a word which shall typify and expound this emphatic quality of change — this antithesis — and we name it, death.

But let not this word mislead us.

Our conception of death, ie, annihilation, would certainly embrace more than obtains in this process, which is namely, that given loss of sensibility, there occurs suspension of function, then change of structure, seperation of and into elements, and finally, their return to original sources. We speak of mortification as death. Parts corrode, decompose and disappear, but the

act

act of dissipation is not a totality, since decomposition itself is productive of gaseous principles. Here, the constituents of the part (and without which the part is not) are dispersed, not destroyed, — and herein is no annihilation. Take combustion as the most notable example, and of the burned substance there is still residue, in the majority of cases, both gaseous and earthy. There is no such thing as annihilation. Nature is all conservation and repetition; nothing whatever goes to waste. (note 1) Life is not given either primarily or ultimately to be defeated; for the act of creation can in nowise be self-iconoclastic.

To

(1) Herschel was a little in advance of me, in the enunciation of this truth.

To believe otherwise, were an absurdity the national mind could scarcely contemplate.

Contractility is a distinguishing vital feature. By this terme as applied to tissue, we mean to express that indesent quality which responds to stimulus; and by sensibility the capability of being so impressed. Or contractility is the exponent of a force whose recipient is sensibility.

I keep in view the distinction made by Bichat between organic and animal sensibility; and I consider it necessary to do so, because a new theory would attempt to show that muscular contraction is

tion is independent of nervous agency; and that "it is the necessary physical result of disintegration" (note 1) And thus to discover also, I presumed, what would be an analagous case, the cause of ciliary motion. However this may be, it is surely quite fortunate that it is not my province to argue the question in this place !!

The chemical constituents of tissue are Oxygen, Hydrogen, Carbon and Nitrogen, united with metallic bases of earths and alkalies; also acids and their compounds in different proportions.

Physical properties and those

(1) Draper. Physiology. p. 444, et. seq.

those peculiar characteristics common in degree to all organic tissues, both animal and vegetable; and which indicate their applicability for general or special systemic purposes. I shall point out examples of these properties of tissue, en passant. Mere description amounts but to cognizance of the fact rehearsed; a specification of use brings us in contact with the law or principle which informs the fact — and this is really our highest perception of fact. (note 1) I shall aim to express, somewhat, the latter in this presentation of my subject.

And first of Osseous tissue:—

The prior state of perfect bone is cartilage; its development thereafter

(1) Facts are things made — principles are truths prior to facts, and determine the nature of facts.
Hickok. Rational Cosmology. 1858.

Therefore – osteo-genesis – is one of the most beautiful of all physiological processes. The vascular concentration of the ramifying vessels determines the point of ossification, which Cartilage in bony transition always displays; and how this nucleus thus established radiate the successive lines or layers of osseous material, in directions corresponding to the form which the bone when perfected, shall exhibit. Perfect bone might be considered as fibro-cellular tissue whose distinctive characters had been obliterated by an excess of ossific depositions. But this attempt at expressing the fact, though by no means equivocal, seems to touch more the mode

of production than the thing produced, and its philological investiture is so remarkable, that I prefer the following description.

Osseous Tissue is cancellated in structure, and enclosed, especially in long and flat bones, between two dense, protecting, cortical layers or surfaces which constitute inner and outer tables. There is no difference in anatomical composition between these tables and the enclosed spongy or cancellated structure; except that the tables are congregated cells in more dense immediate and compact union. The interstices of these structures are filled with oily nutrient particles, and the whole highly vascularized. Long bones exhibit best at

at their extremities this fine, spongy texture; their dimensions being thus expanded without addition of the weight that would otherwise obtain - their capacity being thus in no manner interfered with. Short and angular bones present but a single enveloping table enclosing their cancelli. Flat bones, e.g. cranial bones - are distinguished structurally as having the inner table exceedingly more vitreous and frangible than the outer. In the chemical composition of bone the predominant earthy elements are carbonate and phosphate of lime; the animal matter is gelatine. Physically, bone is hard, dense, heavy, inflexible and slightly elastic. Osseous tissue is the basis on which the whole wonderful superstructure

superstructure of physical life is built up. Where strength, fixity, or motion, are needed, there it ossifies, correspondingly. It forms resisting, protective enclosures for the great central cavities, and is the grand medium of connection for all parts and members of the body. Substance is ever sacrificed to the expediency of lightness, but its otherwise necessary presence is, in some cases, supplied by simple membrane, and in others, by cartilage. The mode of arrangement of osseous specializes the direction and kind of motion. The principle of construction seems, generally speaking, to be upon that of the arch. This can be clearly traced out in the cranium, the carpus, the foot, femur, pelvis, etc; even the cellular arrangement

ment in that portion of upper extremity of femur which receives the weight of the trunk laterally transmitted through the pelvis, is distinctly arcuate. Bones would appear to have been segregated into mutually adapted parts not alone in reference to motion, but also for the purpose of equalizing pressure and dissipating shock — as cartilage placed between such parts serves to diminish shock.

Here, we may remember, too, the beautiful provision made in the bones of the ear, whereby vibrations of sound are dispossessed of dangerous intensity of impression.

Inasmuch as cartilage has been spoken of as the prior state of osseous tissue, it may be well to speak of it in

This

This connection. And it must be remembered that where cartilage exists appropriately, fulfilling its peculiar purposes as such, in the adult system, that it has no direct communication with the circulation; but is nourished as it were by vascular propinquity. The histologist has announced three kinds of cartilage — true, reticular, and fibrous.

True cartilage is said to be a "semi-transparent, homogeneous substance, pearl-white or opaline in color &c". Reticular differs from true cartilage, in presenting apparently a higher organized structure, and differs only so. Fibro-cartilage is an example of the binary form of tissues, being composed of two simple tissues — reticular cartilage and white

White fibrous fasciculi. Cartilage physically is dense, strong, flexible and compressible. Gelatine is the large chemical constituent. It is true cartilage which exists temporarily in osteo-genesis. The elasticity of cartilage adapts it for situations where pressure and exertion is required to be antagonised, and an acting organ to be made resume its original form and position; or it is placed so as to receive and diminish the force of momentum; or it composes cavities where uniform dimension or expansion is desired, and cylinders whose uninterrupted diameter must be permanently so maintained. It might be said that its presence in the system affords the spring

upon

upon which the entire physical dead-weight is adjusted and balanced. Thus, the use of the intervertebral discs (an example of fibro-cartilage) which is perfectly familiar; and the marvelous lamellar arrangement of the same form of elastic tissue in the foot of the horse, wherein, as it has been computed, the weight of the animal is poised on about 4000 elastic arches. Its office, therefore, is a passive, mechanical one.

Fibrous tissue presents itself under the several different forms of white fibrous, yellow elastic, and red or contractile fibrous. White fibrous is offered under the form of membrane,

e.g.

e.g, sheaths and aponeuroses; and tendon
and ligament. In these situations it
must be considered as flexible but in-
elastic, for white fibrous tissue fulfils
its part in the animal system as the
connecting link between all those
structures which require to be kept in
free, yet perfect, apposition. Movable
surfaces are thus ~~disapproximated~~ approximated without
hindrance to or prevention of the actions or
functions peculiar to each. And in this
form singly, or combined with the elastic
property of yellow fibrous, we shall find
it universally distributed over the body,
subserving and performing many important
and beautiful purposes. Yellow
elastic tissue would allow of indefinite
extent

extent of movement, whilst the white fibrous element coördinates and circumscribes its action within essential limits. Thus, the areolar or fibro-cellular tissue of the skin and especially parenchymatous organs would appear to be a compound texture uniting the characteristic properties of both white and yellow fibrous structure.

Mr. Paget remarkes that fibrous contractile tissue differs in no respect from the ordinary fibro-cellular, except as to its power of contraction. One attribute of fibrous tissue must not be overlooked, namely, its property of vibration, whereby it is made responsant to acoustic impulses: as is finely illustrated in the functions of the vocal chords, and membrana

brand tympani.

And now, I think, adipose tissue can be accurately defined by saying that it consists of oil globules collected together in the interstices of fibro-cellular tissues. What it is perceptive of, we may readily discover. Chemistry, however, tells us that three acids enter into the elementary formation of fats: viz, margaric, oleic and stearic; and that these combine with a soluable base, — glycerine.

Adipose tissue acts as cushion and protection to organs; conserving animal heat and affording temporary nutrition, as in the case of hybernating creatures.

(There has been considerable æsthetical nonsense put forth concerning the "line of beauty"

of beauty"; that question was settled definately in the human body "from the begining" — the artist knows or should know that it, — adipose tissue, — makes the true line of beauty!) Par raillerie! — Messieurs.

Muscular tissue: — Taking the ultimate structure ~~structure~~ of this tissue, we find its fibres collected into fasciculi which are arranged in parallel lines; ultimate fibre, as well as the fasciculus, being invested and held together by the delicate cellular membrane technically known as sarcolemma. These congregated and intimately connected fasciculi constitute muscular structure.

The fibre of animal life is distinguished eminently

eminently from that of organic life by the orderly striation it exhibits, as marking the deposition of its composing fibrils.

But there is another peculiarity claimed for it, namely, that fibres of animal life are subject to volition, whereas those of organic life are independent. This distinction, however, is arbitrary.

Muscular tissue composes those textures and organs which are the servants of motion, — through which the motor-power is directly manifested. Progression, propulsion, peristaltic action, etc, obtain through its agency. But the production of motion presupposes a fixed point from which force is to act, and a movable body to be acted on. And this law affords the key to the

arrangement

arrangement of all muscular organs; whence
also the collateral fact that direction of
motion is always exerted from point of
origin to point of insertion of muscle; and
if the tendon of an acting muscle be re-
flected, the movement described will be
in the direction toward the reflected point.
Those muscles, however, which are appro-
priately termed constrictors, having no dis-
cernable points of origin or insertion, act
equally in the whole extent of circumference,
the result being a diminution of diameter.
In hollow organs, as a general rule,
the muscular fibres are arranged spirally;
or they are dispersed in such a manner
as shall eventuate a spiral action.
And this for obvious reasons. Expulsion
of the

of the contents of any viscus would not be favored by an immediate circular contraction made upon them. More efficacious would a force distributed in lines of undulation upon a movable body contained — and this is precisely the action of the heart, stomach and uterus. Muscular action "depends on the primary fact that, under appropriate influences, muscular fibre shortens." In the organic fibres, motion is much more slowly conducted, more feeble and less persistant — than in those of animal life; in the latter, power, rapidity and duration are, so to say, emphatically expressed.

Erectile tissue:— This is a tissue

a tissue whose composition would seem to be made up almost entirely of a vascular plexus; containing, only incidentally as it were, a few of contractile tissue.

I say, contractile; for the distinctive character of this structure consists in its capability of dilitation — erection being the result of this: and dilatability presupposes a state of contraction which may be overcome. The force which overcomes, were, I should say, the removal of blood which is there interpenetrated in infinite ramifications. This tissue occurs in the corpora cavernosa, vagina, and fimbriated extremity of fallopian tube, etc,.

Membranes:— What are membranes?

Layers

layers of tissue, variously modified.
Modified in structure, and consequently
in properties and functions. Bichat
has divided them into simple and
compound. Simple as comprising mucous,
serous and fibrous; and compound as
admitting of the union of any two of these.
The periosteum affords an example of
the fibrous lamina; mucous that of all
surfaces which communicate externally,
as mouth, air-passages, etc; and serous,
that of all surfaces or cavities which do
not so communicate. The uses of mem-
branes are to divide and enclose
cavities, and by the secretions they trans-
mit, to facilitate by lubrication the motion
of gliding ~~cavities~~ surfaces. — to envelop
and

and retain organs in situ, and in the case of fibrous membranes to nourish and augment the solidity of the parts which they envelop.

Epithelium is merely the effete cell of membranous structures. The cells after having fulfilled its office is thrown off at the surfaces. It thus becomes a material protection to the membrane proper, whilst at the same time it affords a medium for the conduction of secretion.

The form of epithelium is entirely dependent on the sort of pressure to which the cell-scale is subjected. One law obtains with reference to this matter — viz, squamous epithelium, such as that of the skin, exhibits and acid secretion, and cylindroid

and cylindroid epithelium, such as occurs in cervix uteri, and alkaline secretion.

There is also a form of epithelium known as the ciliated; that is microscopic prolongations or tufts which accomplish a vibratory wave-like movement. They are seated only on moistened surfaces. And if this fact points out the function performed by these processes, namely, the progression of liquids along such surfaces; would it not also seem to explain the cause of their motion? That is to say, motion taking place from the changes undergone by the secreting cell; for the cilia is immediately connected with it, being in fact the cell-wall projected. This idea would seem to be a

be a legitimate sequence of that hypothesis of motion referred to in a foregoing part of this writing. I myself venture its expression here, and can not certify to even its plausibility, since I have read little about the matter.

Here, Gentlemen, concludes a very superficial, rapid and rambling survey of a few most important histological structures of the human body. The subject has certainly gained nothing from my treatment of it. — I hope it has not lost much! Histological science reveals mathematical truths; and in pursuing its facinating demonstrations, one seems to sit in radiant fairy-like palaces,

palaces, hastening to arabesque stories whose magical impress touches and exhilarates the intellect like Eastern imaginings. A Science that in my young judgement appears to be the stepping-stone conducting into the mystery of all the sciences which deal with man; the true Ontology; and the one science which the student of medicine ~~out~~ ought first to understand and appropriate. One among its highest results is, perhaps, the bringing more and more precise and incontestable proofs of the unity of plan in Creation.

Says a late anonymous compilation — "the formative process is precisely the same in all the departments of the animal

animal Kingdom, from the polyp to man. But having reached a certain station, each diverges and reveals its distinctive traits. All have a common starting-point in the race; that all run parallel to each other for a certain distance; that as the race continues some halt at permanent organic stations which to those of a higher order are but as points in transition; while the highest leaves all its inferiors behind, fixed at specific distances apart like milestones on the route, and finally attains the complex goal of creative manhood."

If I do not misstate a statement received orally from my preceptor Dr. Muhlenbergs, (a man whose character is to me

is to me, as agreeably complete and harmonious as is a note in music), it would then appear that Bichat announced that "from a multiplicity of causes, there arises a determinate simplicity of effect." For in the animal organism, those substances which for want of a better name, are called simple, although they may act as such, effecting single, definite purposes, are in reality not simple, but very complex both in origin and structure. Thus the blood, "whose insinuating charity leaves no alley of the body unvisited"; seeming so homogeneous in structure or character, is actually compounded of multiform ingredients, and fulfilling a variety of complex needs

which

which issue in the demand of perhaps one particular function. So, also, organic animal acts whose expression and design are simple, direct, spontaneous, require for their proper performance the aid of multiplied causes.

But further than this, and in immediate connection with the foregoing statement, is the wonderful fact of allotropism, or the power which enables a single body to assume alternate states of activity and passivity, according, it may be, to the conditions required of it by its presence in vital, chemical or physiological concatenations. Examples especially of a chemical nature, might be readily adduced. Nor does it appear

that

that there is any specific difference in the total composition of, any fundamental diversity in, those two tissual structures which are capable, the one of receiving and acknowledging the impress of volition, and the other, of occupying a station adverse to and independent of it.

And the same fact holds good with regard to those nervous structures which perform the functions of special sense.

Yet all such structures exhibit phenomenal dissimilarity as wide and distinct as the purposes which they subserve. Behind all, as it were, sits an invisible and secret monitor, whose agency seems both absolute and relative, but who is to us "primeval, and unexplored".

But

But I must not encroach upon forbidden ground, nor draw the "thread of my discourse" too fine. I fear I may have done so, unconsciously, already; and to prevent, haply, the like future contingency, I may be allowed to close with perhaps an appropriate ending; thus —

Physically, man is an aggregate cell of perfect adaptability and use.

Morally, he may be compared to a sphere that, in exhaustless momentum, describes the ever-widening circle of a radius whose limit touches the Divine Excellence.

G. W.

An
Inaugural Dissertation
On
Menstruation
Submitted to the examination
of the
Provost, Regents, and faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine.

by
Thomas Owens
of
Baltimore. Maryland.

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fixes the period of puberty, which in this country is about fourteen or fifteen, and continues until about fourty or fourty five, when it disappears. Its appearance reveals the aptitude of the female for fecundation, which continues during the whole of her menstrual life, after which her reproductive function ceases.

The effects produced by the development of this function upon the body and mind, are very striking. The mammae become enlarged, the skin which surrounds the nipple is of a darker colour, the pelvis which before resembled somewhat that of the male, now expands and gradually assumes the shape peculiar to a well

formed woman, the pudendum is covered with a growth of hair, and the general bearing becomes graceful and dignified. The changes which affect the mental faculties are equally remarkable. The pursuits of childhood are exchanged for those of more womanly interest, the voice assumes a softer tone, the looks are more timid, and she becomes shy and embarrassed in the presence of those with whom she sought her childish amusements. These changes are rapid, few females reaching the age of puberty without their appearance.

The occurrence of the first menstrual flow varies from the influence exerted

upon it, by climate, habits of life, and constitution. Thus, in warm climates females menstruate sooner, and cease earlier than in cold. A residence in cities, and habits contracted there, also a robust constitution, have a tendency to favour an early menstrual discharge. While a low temperature, and a feeble constitution, seems to retard the process.

The nature of the discharge, is at first mucus, which becomes mixed with a few drops of blood. The former is increased both in quantity and fluidity, to which is imparted a rosy, and then a bright reddish hue. The amount of blood soon increases, until the flow be-

comes entirely blood. The hemorrhage continues for several days, then as the amount of blood diminishes, it becomes mixed with the vaginal mucus, until it finally assumes the character peculiar to the vaginal secretions. The duration of the flow is from four to six days, commencing indifferently during the day or night. The quantity diminutive differs in most females. The average quantity is from four to six ounces. Some however lose more or less than this, each one obeying the law of her own system. Even females who have been accustomed to lose a certain amount should lose more or less than that amount they should be considered "sick".

The amount of the discharge is not

the same throughout the flow, flowing moderately on the first and second days, increases on the third and fourth, then gradually declines. Nor is it always continuous, it may sometimes cease for a few hours or days, then return under the influence of some exercise. The quantity may be diminished, or the young woman prevented from menstruation when she has reached the time for its appearance by the influence of cold, moral emotions, &c.

The first menstrual flow is generally preceded by symtoms, which are slight in some cases, and well marked in others, all of which indicate congestion. The female complains of languor, lassitude, pain in the back and head, a sensation of swelling in the lower part of the abdomen, fatigue after exertion, a painful swelling of the breast, a dark shade under the eyes, &c. If the discharge takes place

these symptoms disappear the female only complaining of weakness. They may however appear once or twice without any sign of the menstrual flow. These symptoms do not generally recur at each subsequent period, but may sometimes appear with their accustomed intensity or disappear spontaneously. The suffering is not the same in all women, some suffer more or less than others, but that which attends the first, is not a type for the subsequent periods.

When it has become once established, it assumes a regular periodicity, continuing until the menstrual life ceases. The interval between each period is about twenty eight days. This rule holds good except during pregnancy and lactation.

We have thus far briefly noticed the situation as it occurs in the healthy female, and as it is not our intention to treat of any deviation from its natural process, we shall now proceed to treat of its seat and cause.

Few questions have given rise to more diversity of opinion, than that which locates the seat of the hemorrhage. But nearly all modern writers now admit, that it exists in the uterus, and that the blood exudes through the fissures on the internal surface of the mucous membrane lining that organ. That such is the natural process, has been proven by investigations. For it has been seen and felt to flow from the orifice of the uterus by means

of the Speculum, touch, and in prolapsus Uteri

Another point of much discussion arises from the nature, and qualities of the flow. Some writers do still maintain that it is a secretion. They also maintain that it is not blood, from its clearness, resembling clear Juice, and of its difficult of Coagulations. That it is blood has been suggested as far back as Hippocrates, who alluded to it as an effusion. Madame. Boivin believes it to be blood like that taken from a vein. This opinion which is adopted by Prof. Meigs and M. Duges, is entitled to our considerations from the facilities she has as a woman of examining the females in the hospital

over which she has charge. M Donne, affirms that it appears to him to differ in no respect from blood: and that if it has occasionally an acid reaction in place of being alkaline like ordinary blood, it is simply owing to its being mixed with a great quantity of vaginal mucus, which is always extremely acid. It is evident if we draw blood from a vein, and add acid, the coagulability is prevented according to the amount added. This is exactly the same process that it undergoes during the menstrual discharge. The fluidity is increased at the expense of the solids from the mixture of the mucus. If we need any further evidence, we have only to refer to chemistry, where we find the resemblance

between the catamenial discharge and blood very striking, with the difference of the ovaria and uterus.

The brightness of its colour is regulated by the length of time which it is effused. When blood is present in the lungs it produces irritation, which when coughed up it is of a bright colour, the effusion from the uterus is of such a nature that it does not flow rapidly away, thus we find it of a brownish color.

The cause of menstruation has until the last ten or fifteen years remained in much obscurity. It has however been satisfactorily proven to depend upon the maturation and expulsion of an ovule.

We are indebted to the researches of Negrier, Coste, Pouchet, Raciborsky, and others for this explanation.

On reviewing the facts connected with the history of the ovaries, we find that at the age of puberty these organs mature and expel an ovum. The ovum is received and conveyed to the uterus by the peristatic motion of the fallopian tubes. As yet nothing definite is known as to the precise time during the menstrual Hemorrhage, that the Graafian vesicle is ruptured. It may be admitted as a general rule that the rupture occurs during the last days of the flow. If during this passage, the ovule comes into contact with the spermatic

fluid, a change is immediately produced for the production of a new organism. Should they however not receive this influence they burst, loosing their Contents In these females who die during their menstrual life, the ovaries have been found to contain a number of small vesicles of more or less development. These vesicles are barely visible, though they may be shown to exist immediately after birth, but it is not untill the age of puberty that any change is noticed in them. They then undergo a remarkable hypertrophy, and form a projecting point upon the surface of the ovary. As the development proceeds the walls become thin, and transparent, they are then ruptured,

either by the excitement produced by the maturity of the ovule, which is discharged or by sexual intercourse. The influence produced by the latter cause is so great, that it may determine the existence of a Corpus Luteum vesicle, which, without sexual intercourse, would have remained intact for several days longer. The Corpus luteum which is found in the ovaries after the discharge of the ovule is smaller than that found after pregnancy has ensued. The presence of a small Corpus luteum merely indicates that an ovule has been matured and discharged.

Whilst the ovarian vesicle is undergoing the rapid change which we have just

desired, the vascular apparatus of the womb becomes developed and injected in an unusual manner. The entire volume of the organ is increased, its vessels are distended with blood, it sinks lower in the pelvis, the neck is tumefied, and its orifice narrower: the lips of the os uteri are warmer and their color deeper. The uterus is only relieved from such engorgement by means of the menstrual flow. When the menstrual flow ceases the uterus returns to its normal condition, the cervix becomes plugged by its own secretions, which continues in that condition except during the period of menstruation and parturition.

We may conclude that ovarian evolution

described, the vascular apparatus of the womb becomes developed and injected in an unusual manner. The entire volume of the organ is increased, its vessels are distended with blood, it sinks lower in the pelvis, the neck is tumefied, and its orifice narrower: the lips of the os uteri are warmer and their color deeper. The uterus is only relieved from such engorgement by means of the menstrual flow. When the menstrual flow ceases the uterus returns to its normal condition, the cervix becomes plugged by its own secretions, which continues in that condition except during the period of menstruation - and parturition.

We may conclude that ovarian evolution

is the cause and the uterus is the seat of the menstrual hemorrhage. The proof of this we have authenticated facts which prove that when the ovaries are absent, the menstrual flow has been prevented entirely. Such is the case when the ovaries have been atrophied or diseased, or when one is congenital absent and the other atrophied. Again it has been proven, if the uterus be absent, that the ovaries perform their functions. Females in this latter condition retain the menstrual diastesis, though there is no external sign, without any diminution of the sexual desire.

De Sleigs mentions the case of two married women, neither of whom had ever menstruated, and in whom the womb was entirely absent.

Yet they were both perfectly sexual creatures being fully provided with all the sexual attributes and marks. In these cases we see that the uterus may be absent, Yet the females will present strong sexual propensities, which is of itself an evidence of the perfection of the ovarian function, without any sign of the menstrual flow. A case is related by Percival Pott, where the ovaries had been removed, after which menstruation ceased entirely.

From the brief notice we have taken of the menstrual function, we may conclude; that it is a periodical flow of blood which manifests itself externally; the seat is the uterus, and the lining

menstruation the agent. But the stimulus must be supplied by the ovaries, being for the most part a matter of indifference whether or not it causes the menstrual discharge: the essential thing is to mature and deposite the ovule. It is owing to this fact that we find so many cases of women who have become pregnant without ever menstruating.

Menstruation does not occur in those who are not capable of conceiving, nor in those who have not arrived at the age of puberty. Conception cannot take place prior to the first evolution of the Graafian vesicle, nor after it has ceased. That it may ensue it is necessary that a matured ovule

must be expelled ere fecundated by contact with the male semen. As period at which fecundation is most likely to take place, appears to be that immediately following the flow of the menses, some authorities limit the time to the twelfth or sixteenth days following the menstrual terms. As we have stated females cease to be regular during pregnancy; yet the menses may continue during this period: they frequently appear in earlier months, more rarely during the first five or six months, and still more unusual, they may exist during the whole of pregnancy.
On the other hand females may become pregnant without ever having had their menses, which may be either suppressed by accident, or in consequence of nursing, &c. For this reason we find it not uncommon for women to conceive during

lactation, or immediately upon weaning, before the Catamenia appear

It would be entirely useless for us to attempt any explanation, why menstruation occurs periodically. It is sufficient for us to know, that it is this law which characterizes it flow, and that it could not exist otherwise, without causing the greatest disorders.

The cessation of the menses generally occurs about the age of forty-five or fifty. They may however alt, their commencement terminate sooner or later, according to the influence exerted upon them by climate, &c.

The cessation rarely occurs suddenly it is generally announced several years previous, by irregularities and intermissions. Thus it frequently happens that the returns of the menses suffer postponement, which may be prolonged for several months, then recur, after which it may be deferred a longer time than previous. The quantity lost may be either larger or smaller than natural, the former to such an extent as to give rise to apprehensions, while the latter may be very small, lasting only a short time. In some women the flow may remain so long beyond the natural period, that its recurrence is only noticed by its increase. The discharge may be replaced by an mucus flow, which is very abundant, and which may

be continuous, or recur with regular intervals like that of the menses, it may also continue after the menstrual discharge has ceased entirely.

Besides these we have other General symptoms. There is a general and indefinite feeling of uneasiness, lumbar and pelvic pains, itching at the genital parts, flushes of heat in the face, &c.

This period has recieved numerous titles, from the many diseases women are supposed to be subject to when it occurs, thus it has been called the turn of life, or the critical period. It has been shown by statistics, that the mortality in women is no greater between the ages of forty-five and fifty, than at any other period of female life.

The cessation of the menses, produces in the generative organs effects entirely opposite to that which their commencement had determined. The ovaries become atrophied, and deminish in size in every direction, the uterus and breast gradually waste away.

—End—

An

Inaugural Dissertation

on Rubeola

Submitted to the examination

of the

Provost Regents and Faculty

of Physic

of the University of Maryland

for the

Degree of Doctor of Medicine

By Dickey Moore. of Va

February 1859

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Rubeola

Measles is a disease of so mild a character generally that with ordinary care but few die without unless there already exists a consumptive or hereditary disposition to consumption. But there are examples on record of measles having existed in different places which proved fatal to nearly all attacked from this cause. no doubt the Latins gave the disease the name of morbilli or little plague and of this description was the measles which existed in Stockholm in the year 1713 which proved so fatal to the inhabitants & still more malignant

form of measles prevailed in
Vienna in the year 1732 The
most of those attacked dying
with mortification on the
third or fourth day measles
in a General way occurs
epidemically the contagion is
spread in the same manner
as that of similar
diseases is communicated
from one to another and
in by far the greater
number occurs but once
It is said to be a more
common disease than that of
scarlet fever and that more
persons are attacked by
it than by the former
disease the most of authors
describe the disease in two
forms Rubeola - vulgaris

and Rubeola maligna besides which there are irregularities and complications, as regards its causes there can be no doubt but its epidemic influence is the chief cause and its infectious nature is admitted by all may be given with an introductory or primary fever and is some times extremely severe corresponding to the time of dysmanation from the period of incubation and varies from five to twenty days the average from a week to ten days the symptoms are similar to those of Variola and Varicella

beginning with lassitude irritibil
ity chilliness followed by
heat of surface increased
frequency of pulse loss
of appetite and thirst some
times diarrhoea and often
vomiting the vomiting
however ceasing on the
appearance of the eruption
the eruption appears
generally on the fourth
day some time after
the fourth but rarely
earlier the eruption has
the appearance of a rash
first making itself man
ifest on the chin and
cheeks and subsequently
extending to the trunk
and extremities it com
mences in the form of

spots and has been com
pared to flea bites of
a rose color some times
of a deep read when fully
formed and some what
elevated firm to the touch
the fever seldom diminishes
on the appearance of the
eruption though it some
times augments the
catarrhal symptoms are
also increased on the apear
ance of the eruption the
eyes are often red and
swollen as well as the
whole face the various
signs of nervous disorder
cease on the appearance
of the rash the cough
now becomes more loos
and mucus is expectorated

all the symptoms of the
disease usually begins to
decline about the seventh
day commencing on the
face the redness fades then
giving way to a dirty
yellow hue the cuticle in
stead of scaling off in
scarlet fever crumbles off
in fine powdery scales
it is seldom uniform
be giving usually on
the face and extending
over the whole body
it is often scarcely
noticeable it generally
continues four or five
days and is frequently
attended with trouble
some itching at the
eruption and fever

decline the sputa becomes more opake occasionly. the pectoral symptoms instead of a bating are agravated and Bronchites is made manifest by auscultation instead of diarrhoea some times comes on which if moderate is considered rather favorable however its is some times exceedingly troublesome measles offers many varieties owing to irritation of the internal organs the progress of the eruption is often delayed undue purgation is said to have the same affect under these circumstances the eruption should be sought for

the causes which retard
the eruption will some
times cause it to recede
after it has appeared the
retrocession is often fol
owed by many distressing
Symptoms such as diarrhoea
coma convulsions and
great prostration There is
another affection described
by Willan and others
called Rubeola sine exanthe
or measles without exanthal
symptoms it is said
however that this variety
affords no protection against
the recurrence of the
disease measles has many
complications and sequela
of which by far the
most common is

Pneumonia and Bronchites inflamation of the intestines is not unfrequent opthalmia is not less frequent than enteritis and is often severe measles are also said to favor the developement of tubercles in persons predisposed to them the anatomical Lesions are congestion of the different organs which are colored and frequently softened the most important of them is the blood Andral Gavaret and others found that the fibrin seldom exceeded the average of

health while the red cor
puscles were in most
cases above the common
standard proving the exis
tance of a febrile rather
than an inflamatory
character measles is
vary hard in its first
stage to diagnose from
other diseases especially
catarrhal fever it is
maintained by some
writers that it may
be distinguished by
the cough by the way
there is always some
uncertainty until the
eruption has made
its appearance it can
scarcely be mistaken
for any disease accept

Roseola it may be distinguished from that by the absence of catarrhal symptoms when measles is uncomplicated Without any other disease the prognosis is generally favorable when the disease proves fatal it is commonly from inflammation of the Bronchial and pulmonary textures the danger is far greater in old than in young persons the most unfavorable symptoms are great severity of the early fever the eruption being slow in making its

Bowels as well as the
paliation of any of the
symptoms that may
become troublesomeer than
usual when the case is
by any means severe the
Remedies to be used are
mild Laxatives magnecia
bastcroil Rhewbarb it is
well to Gave it in [illegible]
small doses repeatedly they
intrate the gastrointes
tinal membrane demul
cent drinks are vary
serviceable at this time
a solution of gumarabic
flaxseed slupperyelm. &c &c
when there reaction is vary
considerable much headach
and hat skin small
doses of antimonial wine

the neutral mixture with mustard foot bath may be necessary should the symptoms threaten croup arsenic must be resorted to followed by a small dose of Colomel when the cough is troublesome anaxodine may be administered when the eye lids are inflamed they should be frequently anointed with mucilage of sasapas pith its use as a Colerium is highly recommended a continuation of this treatment should be persevered in until to wards the decline of the eruption if the cough should be

An

Inaugural Dissertation

On

Typhoid Fever

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Thomas Perry Robeson

of Maryland

February 1859.

Gentlemen.

Having scanned over the long list of febrile diseases to entitle the human family remaining heir, there is not one, we think, commanding the most diligent study and careful attention of the student, more than Typhoid fever. This is a disease febrile in character, as its name implies, assailing individuals of every Country and Climate, habit and temperament, age and sex; from the cold and barren cliffs of Greenland, to the burning tropics of a southern clime, its unfeigned character is recognized & feared —

the King and his subject to the
master and his slave, youth, man-
-hood and old age, all, all are am-
-enable to the same law

Typhoid Fever.

Typhoid or Enteric fever presents considerable variation as regards its Commencement, duration, and intensity, however in the majority of cases there are certain premonitory symptoms which forewarn the inteligant patient and Practitioner of a most serious malady following close in their wake. These premonitions are usually ushered by way or means of a slight Chill, followed by increase of pulse. pain and soreness in the back, and limbs, Vertigo, Nausea and sometimes Vomiting. Diarrhoea is generally, though

not invariable present, for in some, constipation supervenes, nevertheless in these cases the bowels are very susceptible to the action of cathartic medicines. This form of fever for clearness and precision has been divided into three stages each accompanied by their respective symptoms. The first stage presents the usual phenomena of fever characterized by frequent & full pulse, dry & hot skin, great thirst & loss of appetite, headache, lassitude & general debility. There are some others

which are peculiar. the flush
of the face is of a purplish
tint (when this is absent (which
is rare) the complexion presents
a dusky hue, with a dull and
heavy expression. pain and sore-
-ness in the back & limbs. with violent
headache the later being the only
symptom complained of (many.)
Hemorrhage from the nose is a fre-
-quent attendant. generally being
slight proves no inconvenience,
whilst acts as a salutary effort
of nature in relieving the disten-
-ded capillaries of the Schneiderian
membrane. also giving an im-
-portant diagnostic sign to the

practitioner. In some cases and especially those in which during the habit the pulse does not rise above 90 or 100 beats per minute, whilst in others especially females, any those of a nervous & excitable temperament it frequently rises to 120 or 130. Remissions in nearly all cases come once or more daily the exacerbations ending in a slight perspiration. The afore mentioned symptoms go on gradually increasing, the pulse becomes quicker and less strong, the tongue previously moist & covered with a thin cream like fur becomes dryer the fur more

tenacious and lined slightly brown, leaving the lip and edges uncovered & reddened, the diarrhoea in some cases is excessive & commands attention, whilst in others a costive state of the bowels supervenes requiring the use of aperients. Pain is experienced in the right illiac region, tympanities is revealed by percussion & gurglings from pressure over the above mentioned region, pain in the illiac region is doubtfully produced or brought about by some alteration of the elliptical patches of Peyer & the mesenteric

glands- the tympanitis from gaseous distension, and the gurgling from air passing through fluid -. The urine is variable both as regards its quality and quantity, in some being little or not at all changed, while in it is scanty high coloured and offensive, Bronchitis commonly sets in at this the latter part of the first stage, This stage lasts from 7 to 9 days at the expiration of which time the second stage makes its appearance clearly unfolding diagnostic symptoms which are so truly characteristic of this disease. The tongue which

was covered in the preceding stage by a pus somewhat moist & but slightly ringed. Now assumes a distinct brown colour and becomes nearly dry, the abdomen presents a convex form from over distention. the act of swallowing is sometimes very difficult & painful. and at this period though sometimes earlier the rose coloured spots make their appearance. first being perceptible on the abdomen afterwards extending to the chest and sometimes to the face and limbs. There is another eruption consisting of small vesicles filled

with a transparent liquid. These are common to the neck & chest near the axillae. being of small size and containing a colourless fluid may be easily overlooked. they roughen the surface and cannot be seen unless the patient be so placed, that the light falls upon the surface obliquely. The nervous symptoms becoming more prominent the sufferer is relieved of his headache, delirium being installed in its stead accompanied by singing and buzzing in the ears and in some to such an extent as to bring about entire deafness - The eyes are

usually inflamed, the tongue trembles when protruded, and black sordes gather upon the lips and teeth. The patient is unable says Dr Watson to make or bear that degree of voluntary exertion which would be necessary to place him upon his side; hence we have it as a good omen, indicating that the patient still retains strength, if we find him on his side, or even on his back with his legs drawn up. Feebleness of voice is another indication of muscular debility. In many instances the power of deglutition is apparently though not

really lost. but very frequently we find the patient too restless to make an attempt & the dry and arid state of the tongue renders the act of swallowing very painful & difficult. This dryness to which we have referred, is produced by the sufferer's breathing almost exclusively through his open mouth. Therefore it is always necessary to desire the patient to swallow some liquid in order to moisten the parts by which we can better determine the true condition of those organs & the facility of swallowing. Before describing the third stage I will review and enter more

minutely into the description of two very important symptoms occurring in this the second stage. namely the lenticular rose coloured eruption, & the delirium,

The former stamping this disease to be Typhoid almost as certainly as the well known eruption, so characteristic of Smallpox. The delirium of Enteric fever is peculiar, for in the majority of cases it attacks the patient at night, an generally on awakening from a disturbed sleep. In some instances the patient is desirous of leaving his bed, talks earnestly & in a low of manner & generally requires the imposition

to some restraint to enforce the recumbent posture, however in the majority of cases the maniac is of a tranquil kind, instead of the loud & earnest appeals which some make, the voice is weak, words are now articulated, and sentences incoherent, though the sight of strange faces, & when addressed in a loud voice, or the sight or entrance of his medical attendant he will rein in his wandering mind, and for a short time answer very promptly the questions of his Physician or friends, this period of consciousness as we before stated, is of short duration, as the sufferer is soon

shrouded in the old veil of Stupor and once more relapses into his former incoherency. At this Period of the disease there is great depravity of sensation, the patient becoming hard of hearing or entire deafness supervenes, this is considered by some to be of good omen but (Dr Watson) thinks only by comparison, as it is only indicative of a less perilous condition of the brain, than its opposite, in which the hearing is morbidly acute. Derangement of vision is much less frequent, & prognosticates a far more unfavourable termination, In some cases however as the disease

advances, black specks are seen floating in the air (This is called Muscae volitantes) the sufferer making frequent attempts to catch the floating objects or pluck them from his bed or person, the later is called floccitatio, & is doubtlessly produced by a partial insensibility of the retina. These are considered grave symptoms and very few recover after they present themselves - The senses of touch, taste, & smell, become impaired, or totally lost, this warns the practitioner of a strict observance on his part concerning the setting in or existence of external irritation & inflamation -

(this presents itself upon parts most exposed, as the hips & sacrum) or in some cases it will go on to such an extent, that sloughs will form and even gangrene, & mortification supervenes without being noted by the feelings of the patient.

Involuntary evacuations of feces and urine [illegible]

[illegible] (this [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

found more or less altered, generally enlarged and softened, and some cases should be observed in making an examination of this organ, for in some cases being enormously enlarged its consistence is that of bloody pulp. The liver & gall bladder is sometimes altered but less frequently than the spleen. When so they are enlarged

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

and liable to be mistaken for other ma-
-ladies. The one found assailing the in-
-dividual in connection with Enteric
fever is Bronchitis, and sometimes this
disease supervenes upon pneumonia.
The one most commonly mistaken
for this disease, is Billious remitt-
-ent fever. but can generally if not
always be distinguished, by the yellow-
ish hue of the skin, the vomit in [illegible]

There is no case Not even the Mildest form of this disease that can be considered as Not the Precursor, yet there is consumption so fatal that

If great prostration & [illegible]
the powers of life must be supported
[illegible]
whine whey milk punches & as the cir-
cumstances of the case may demand.
The diet in all cases should, I
think, gradually improve as the
disease advances. Great care should
be observed both as regards the
[illegible] exposure fatigue.

Now Gentlemen having finish-
ed my essay on Typhoid fever I
submit it (with all its imperfections)
to your consideration & remain
yours.

Most Respectfully
Thos. P. Robyson

on

Inaugural Dissertation

On a Portion

Submitted to the Examination

of the

Provost Regents and Faculty of

Physic of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Nobil K. Robinson

of Harford Co.

Maryland

Febo 10th 1859

To

C. Lover Cox M.D.

of

Baltimore Maryland

in

Grateful acknowledement

of his

kindness to me

this

humble dissertation

is

most respectfully dedicated

by his student

Robert K. Robinson

Abortion

Among the many accidents to which the human race is subject few if any bring with them more perilous consequences than abortion.

The premature escape of the ovum is no doubt often regarded as an agreeable loss, whilst in others, sad disappointment and grief are the concomitant attendants, in either case the life of of the female is in jeopardy and when that is spared the constitution is liable to be broken down and her health irrecoverably destroyed.

When all the dangers which originate from abortion are considered, how attentive should the physician be to use his knowledge in a manner best

calculated to prevent its occurrence and if that cannot be accomplished, to assuage the evil consequences it is likely to originate.

To treat these conditions in a skillful manner requires a knowledge of all the symptoms, and causes as far as can be learned. Also the treatment which has been found most subservient after due consideration of all the indications. by practical and experienced men.

I shall now give the history and treatment of abortion which from lectures by our Profesor of Obstetrics. well recommended works. and my own judgment direct.

The expulsion of the ovum previous to the seventh month

is denominated abortion in this country and Great Britain. By the French the sixth month. But the term of seven months appears the more rational, as the foetus is rarely viable previous to that time.

There are three periods in which there are different degrees of danger.

In the first months from the small attachment of the ovum it is more liable to be cast off.

At the menstrual periods after pregnancy although there is not generally a discharge, yet there is more or less flow of blood to the parts.

Therefore there is a much greater number of abortions in the first and early part of the second months.

But early abortions have the advantage of not being generally so dangerous as regards pain and hemorrhage. the ovum in some cases being expelled without the knowledge of the woman, also from the small attachment of the placenta produces but slight discharges of blood.

Second period from the increased attachment of the placenta, the want of elasticity in the os and vagina. also the inability of the uterus to remove its contents, generally this period is the most dangerous. Our means also appear less efficient to stop the flooding when abortion has commenced. Third period is generally

outlet the former causing hemorrhage and the latter pain.

We judge from the cessation of the signs of pregnancy that the ovum is not viable in the early months, later in pregnancy the cessation of the natural movements of the foetus to the woman. The process is always accompanied with more or less hemorrhage in some cases slight in others very great. Duration is variable being from a few hours to several days.

There are two conditions each of which require particular attention, these are accidental and habitual abortions, the first may occur at any time the second generally in the first

weeks of gestation.

Symptoms may be divided into those which precede the occurrence and, those which accompany it and indicate its commencement and progress. The first is a cessation of those sympathetic feelings which are experienced by pregnant women, such as morning sickness &c.

The second are those which accompany the process, these are similar to the first symptoms of labour. Such as periodical pains. bloody discharges from the vagina. which one often slight at first, also some degree of coldness in the lower part of the abdomen when after the fourth month

she ceases to feel the foetal movement.

Causes are numerous and often difficult to detect, some are easily learned yet unfavorable to remove.

They may originate in the father mother and ovum In the latter it is supposed more frequently. When in the father it is generally caused by syphilis. In the mother the cause may be local or general. The local causes are falls, blows, lifting or undue exercise, abdominal tumors, ulceration of the mouth of the uterus, fungous growths &c

Constitutional causes are plethora and anaemia with nervous irritability

the first producing rigidity of the parts of generation, causing the expulsion of the contents of the uterus, particularly at the regular menstrual periods, and more frequent in the early weeks of pregnancy.

In anaemia there is produced a weak and irritable condition of the system, which is a fruitful cause of abortion.

Many of the fevers, such as the malarious particularly the exanthemitous as small-pox scarlet fever and measles.

In some cases there is a strumous and syphilitic diathesis. Should the woman be affected with the latter disease she cannot bring a healthy foetus into the world.

In some women there is a habit of aborting at regular periods owing to great irritability, - in such cases the slightest cause will remove the ovum, such as a misstep in walking, riding over rough roads in a carriage or on horseback. Also various mental emotions as joy, grief, anger, exposure to cold, irritation of the intestinal canal, drastic purgatives will irritate the lower bowels thereby causing the uterus to sympathise and contract. Too frequent sexual intercourse often is a cause of early abortions.

The time which the ovum may remain in the uterus after death is variable, in the early

weeks of gestation generally but a short time owing to the small attachment and the comparative smallness of the foetus.
At a later period it may be retained much longer from a few weeks to as many months
Still later the foetus being much enlarged and bearing down in the lower part of the pelvis excites the uterus to contraction and is soon expelled.
In some cases the cause is unknown and it is therefore our duty to make the most careful inquiry into all the conditions of the woman which in any manner may lead to its origin.
It is only in this way we can understand its true nature at treat it with advantage.

The causes are often found in the ovum and its envelopes all of which from their structure are very subject to disorganization, when such is the case it will inevitably lead to the death of the ovum. Such as atrophy of the umbilicus also disease of the amnion causing effusion and consequently amniotic dropsy. Of all the causes most dangerous are atrophy and hypertrophy of the placenta. the former destroying the ovum by want of sufficient nutrition the latter by a superabundance of the necessary sustenance. There is yet another cause which is very fatal to the ovum. when the father has syphilis

in its first and second stages here the ovum being diseased by the father and so long time in contact with the uterus the poison is conveyed to the woman by the close connection between them. In all cases where there is a doubt as to what originates it the secundines should be examined carefully

Treatment. this will necessarily vary with the causes as they are many so will be the means for their removal and prevention of abortion.

There are three conditions in the treatment. First to save the ovum when this can be accomplished without prejudicing the life of the woman too far. Secondly when this cannot be

effected to conduct it with the least possible danger to the life of the female. Thirdly remove the constitutional causes which leads to habitual abortions whatever they may be, The treatment for the first condition is general and local. Pain and hemorrhage are the two great symptoms of abortion. yet these may both continue some time without necessarily producing death of the foetus On making an examination per-vaginum when the foetus can be felt or the bag of waters ruptured or a great amount of hemorrhage there will be no possibility of saving the ovum. As these are sure indications of its death.

Mild cases in plethoric women should there be slight pains and scanty discharges of blood.
The patient should be directed to use mild diet, give very mild aperients to keep the bowels regular. Such that will not in any manner irritate the uterus to contraction, with refrigerant drinks also use astringents and anodynes. Such as opium and acetate of lead. It is also very necessary to use cooling applications to the vulva yet not sufficient to produce contraction of the uterus. And perhaps a few leeches may be useful. should there be much fulness and tension. But if there be much congestion, pulse hard, skin hot and dry, with much weight about

the pelvis then general bloodletting should be resorted to which usually acts with the greatest advantage. After bleeding give opium in large doses to calm the system or what is considered very good a combination of opium ipecac and acetate of lead. These may be repeated should they be found necessary. they may be administered by the mouth or rectum the latter mode is much the better. The patient should be placed in a recumbent posture on a hard bed in a well ventilated room give cool drinks. also the diet should be very mild and light

In an anaemic patient when there is danger of losing the ovum. We must depend on opium to remove the pain and quiet irritation.

astringents as acetate of lead to act by contracting the capillaries and use ipeca to equalize the circulation. And at the sametime build up the system by tonics and good diet. One of the preparations of iron is a very good tonic in these cases. In all cases where there is not danger to the woman should the foetus be known to be dead, and expanding the os uteri to some extent. Should there be no bleeding. It is best to let nature take her course as there is great danger by manipulating of producing hemorrhage. The second condition we have to treat is after all has been done possibly to save the woman, and stop the hemorrhage and pain, both continue. the os uteri also

becomes dilated, yet only sufficiently to let the blood run freely without the extrusion of the ovum and after-birth. Now is the time when the neglect on the part of the attendant physician may let the woman die from floodings.

The physiccan is now looked to with great anxiety, often to save a friend of the greatest interest in the family. It is not as a chronic disease, but has come on in an instant to the patient who had previous to the moment of attack been in good health and looking forword with her family to a long life of happiness. Now may be suddenly cut off without a moments warning, perhaps from the neglect and inattention of the physician in whom the patient

with her friends had placed their greatest trust. When all the dangers are considered, how studious should the physician be to learn his duty, and when acquainted with the best means to apply in the most judicious manner. The greatest danger is from hemorrhage which can only be stoped by the removal of the contents of the uterus.

The means for this purpose are ergot, friction, removal by the fingers forceps and hook, But the best of all is the tampon or plug but which cannot be used after the fifth month.

Ergot and friction are used to excite the uterus to contraction thereby to remove its contents, but they often act slowly or too inefficiently to remove the ovum in time

to save the woman. Then it is the duty of the attendant to remove with the finger if the os is sufficiently dilated. Some use a kind of forceps made for the purpose a hook is also used but these are very dangerous instruments and should be used with the greatest care, as they are very likely to injure the woman. We are liable with these instruments only to remove a part of the contents of the uterus, and the remaining part may putrefy and set up disease. But the best means previous to the fifth month is the plug or tampon. which may consist of sponge or should that not be convenient a pocket handkerchief which should first be wet with a dilute solution of vinegar to

coagulate the blood, and should first be applied against the os uteri then gradually fill up the vagina. The tampon may remain according by as the danger may be, from a few hours to twenty-four. The usual time it may be left is from six to eight. When removed, the contents of the uterus will generally follow immediately. The plug should not be used after the fifth month from the great danger of internal hemorrhage. And should only be used under the immediate attention of the physician throughout the fifth and latter part of the fourth month, from the great danger of internal flooding. We can generally ascertain that flooding has began by applying the hand to the abdomen and noticing the tumor. also by attending to the pulse

lifes and, general condition of the patient.
To assist these means she should be kept
in a horizontal position and continue
so the usual time that a woman is con-
fined in true labour. When there
is great prostration, with weak and
feeble pulse, it may be necessary
to give very mild stimulants to
support the system yet not enough
to excite the system or increase the
flow of blood. When the placenta is
retained after the ovum is expelled it is
generally more unfavorable to treat as
there is much more space for blood to
accumulate, and without close atten
tion blood may gradually fill up the
cavity of the uterus without the knowled-
ge of the physician and cause the
death of the woman. Grasping and
friction should be used to the uterus to
contract and expell the placenta

At the same time use the tampon watching carefully the patient noticing her pulse, lips and tumor in the abdomen, It is also necessary to use astringents and anodynes. Should the patient be very much depressed from loss of blood give mild stimulants such as wine and brandy with water

The third condition for treatment is where there is a predisposition to abortions

In habitual abortions the cause which originates them should be removed if possible. In many cases this is a very difficult matter requiring the closest investigation, which should be done in all cases. In some cases when the cause is ascertained it cannot be removed

as in a patient having a deformed pelvis. Where the ovum is removed by slight causes there is generally a predisposition and until that is is removed direct treatment will not avail. Now we should use our means to the general system when we have learned the constitutional disease. The disease or cause which leads to abortion may be plethora or anaemia. these conditions should be treated by the usual means found best calculated to improve and cure the general system. In pethora where there is a tendency to abortion the patient should use mild diet, cool drinks, also the cold douche has been used with great advantage.

Great care is very necessary about the regular menstrual periods

In the opposite condition where there is an anaemic constitution. This should be corrected by attention to the patients diet. She should use moderate exercise in open air, keep the mind free from excitement as far as possible. Using at the same time the usual tonic treatment for the disease. Such as the preparations of iron and the mild bitter tonics.

Endeavor to carry the patient through one natural labour and generally it will require less effort a second pregnancy. Ulceration of the mouth of the uterus often accompanies constitutional disease. This should be treated by astringent injections and the ulcer should be touched

with nitrate of silver. So if possible to set up a new action in the part and lead to a healthy condition.

Should the woman be found labouring under syphilis while pregnant, We should immediately put her under the usual treatment for that disease.

In some cases where there is so great a predisposition that the slightest cause will throw off the foetus.

When a female in this condition is found pregnant it has been recommended to keep the woman continually confined in the recumbent posture until labour comes on. This with the usual constitutional treatment will in some cases succeed favorably.

An

Inaugural Dissertation

on

"The Conservative power of Nature in Disease"

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Joseph Lewis Oliver.

March 1839.

"The Conservative power of N. in Disease."

By

Joseph L. Oliver

of Baltimore

Md.

Many the most complex, [illegible], and
noble being of creation, to heighten [illegible]
[illegible] to, is possessed of that high
degree of sensibility, by which he is
rendered more susceptible to the action
of those destructive causes, which [illegible]
continual operation around him.

Exposed as he is, to these [illegible]
influences; the ills of human nature are
greatly aggravated, by the too common
indulgence in sensuality and luxury;
and pain thus becomes the frequent and
bitter companion to the pleasures of life.

Medical Science has for its noble
object, the alleviation of this pain, and
the arrest of all those causes, which
tend to shorten an already transient
existence; the knowledge requisite for
the consummation of these ends, must
rest on our knowledge of man's complicated

and we derive mechanism. Why is it these destructive causes, do not more frequently succeed in perverting the healthy functions of the body; substituting in their place disease? Because there is a certain power inherent in every constitution, always tending to restore any deviation from the healthy equilibrium. This power has been variously called, the "Vis Medicatrix Naturae", "Vis Vitae", and the "Recuperative powers of the system"; but of what it consists, or where is its situation, we are unable to say. We are acquainted with it only through the effects it produces. Its activity is excited not only to prevent disease, but when disease is established, it perseveres energetically to return the diseased organ to its pristine condition of health; and ceases its efforts with death alone.

Many, if not all morbid processes, are the

efforts of nature to relieve herself of some foreign or morbid material, which, if allowed to remain would be injurious to her welfare; or to repair something by which she has sustained.

The duty of the Physician mainly consists in assisting nature to eliminate these materials; and to remove all causes which would in any way interfere with the accomplishment of these ends.

Medicines are not always required for this purpose. The most important agents in the treatment of disease, are not found within the long catalogue of the Materia Medica: such as, Rest, Abstinence, and other Dietetic measures, Hygienic means, and regimen of body and mind.

We have yet found no drug capable, when administered, of uniting the extremities of a fractured bone; or of converting granulations into healthy skin; but we have found in

the former case, if we keep the ends in perfect apposition, nature immediately establishes a vital process, by which the continuity of the bone is, in a short time, restored. In the latter case, we have found, if we remove all irritating causes, the granulations &c. were in contact with healthy skin, take the impress of the cells composing the skin, and become changed into them.

In wasting through the wards of a hospital, and noticing carefully the different cases there presented, we cannot fail to observe with admiration, the ceaseless effort Nature is making to overcome disease, and restore healthy action. She does this sometimes at an enormous expense of the vital powers of the system; but the Physician should always be near, to prevent her from exhausting her powers beyond restitution.

Let us witness her proceedings in some of

our most common diseases.

The first case presented for examination is one perhaps, in which an abscess has been recently opened, either spontaneously or artificially; and we see before us, a deep cavity from which pus has been discharged. No case could show more visibly the beautiful process Nature establishes for restoring the continuity of broken tissues.

It is the same process precisely by which the broken bone is united; the lacerated muscle made to adhere; the torn skin healed; and the severed nerve cemented. Observe now the cavity is filled. Inflammation is present; and as a consequence Coagulable lymph is thrown out; this being in contact with healthy vitalized tissue, receives the vital impress of that tissue, and is converted into it*: if in contact with cuticle, cuticle is formed; if with bone, it is

* Muscle and Cartilage are exceptions to this law.

converted into bone: if with [illegible] it is changed into nerve &c. But more granulations are formed than can be brought into contact with the surrounding healthy tissues, these as a consequence are changed into Pus, and are discharged externally. This process is gradually repeated until the cavity is filled, and becomes [illegible] with a layer of cuticle. No "healing balsam" is required to assist this process, all such applications interfere with it. All that is required of the physician is to keep the part at rest, and prevent any external interference.

The next case, may be one of that prevalent and lamentable disease known as "Pulmonary Phthisis"; and without pausing to make any general comments respecting the fatal and almost hopeless [illegible] of the disease; and the [illegible] it pro-

-duces among the young, the most gifted,
and the most beautiful of the [illegible];
let us examine the phenomena presented.
"Phthisis Pulmonalis is no more than a
fragment of a great constitutional malady";
but that malady plays its part most con-
spicuously in the lungs. Portions of
tuberculous matter are deposited in the upper
lobes of the lungs; giving rise by their pres-
-ence to a certain amount of irritation, as a
consequence of which congestion takes place.
In order to eliminate them from the
system, nature sets up ~~a certain~~ inflammation
around them; which occurring in [illegible]
constitutions, has the character of [illegible]
-lous inflammation; the thin pus thrown out,
pervades and loosens the deposit; a process
of ulceration goes on in surrounding textures,
when at last the deposit makes its way into
one of the bronchi, is coughed up and [illegible]-

-pectorated. These changes are performed gradually, and give rise at various times to Hemorrhage, Cough, Emaciation, Night-Sweats &c, and are the process by which Nature attempts to relieve herself of these deposits. The recovery would be complete if no fresh deposits took place; but too often the tubercles multiply; the enormous amount of suppuration required for their elimination, and the constitutional irritation consequent upon this drain, cause the vital powers to flag, until they become incompatible with the further continuance of life.

Nature sometimes attempts another mode of elimination, especially when the disease is limited. The watery portions of the deposit become absorbed, leaving the saline ingredients concreted into a shrivelled, hard, and chalky mass; which is sometimes expectorated, sometimes remains [illegible]

[illegible]

[illegible]

[illegible] diminating these tubercles from the lungs? I think not! She is [illegible] performing [illegible]! How then can he be of use to the consumptive patient? He can render him great assistance, by placing his constitution in the best possible condition to go through with these changes. Hence the great benefits resulting from the administration of Tonics, more especially Cod Liver Oil: which acts also as a nutriment: [illegible] and Travelling. By these means the vital powers are exalted, the patient is better able to resist the necessary constitutional irritation, and better able to endure the [illegible] exhaustion [illegible]. If the tubercles are deposited slowly, and the intervals long

between the deposits, the system becomes
accustomed to the habitual discharge,
and irritation; and by employing the
foregoing remedies, the patient may
be [illegible] of health, [illegible]
participate in the [illegible] of life;
and in a certain degree to enjoy its
pleasures.

The next case may be one of that
very common, and very painful affection,
Rheumatism. Although our knowledge
of the pathology of this disease has
been much increased of late years, there
is still much remaining a mystery.

We know that the essential characteristic
of the disease, is the presence in
the blood of some morbid material,
which is deposited in various parts of the
body, more especially by [illegible], in the [illegible]
tissues of joints — giving rise, by its pre-

-ence to the phenomena of inflammation. What the chemical composition of this material is, has not yet been definitely ascertained; most pathologists regarding it as being different in different cases. We have seen that the presence of this deposit around the joint, excites inflammation; but this is not the process Nature establishes for its elimination. Imagine the destruction necessarily produced, if it was! The inflammation would proceed to ulceration; and the rheumatic material would thus be thrown off. The effects of this process would be the total destruction of the functions of the joint, and the consequent interference to the motions of the limb. Nature is aware she can relieve herself by a less destructive process, consequently the inflammation does not proceed to ulceration, but terminates in resolution.

[illegible] is [illegible] into the circulation, and is eliminated by the two great depurating organs of the blood; the kidneys and skin; giving rise to the lateritious deposit in the urine, so frequently observed just before convalescence commences; and to the profuse [illegible] so common in that disease.

What indication do the observation of these facts give to the Physician for treatment? It should say to increase the action of the kidneys and skin! It is by producing these effects, that the preparations of Mercury, Iodine, and the Alkalies act so beneficially in this disease. These medicines have the power of producing an increased amount of waste in the body: that is, they produce a more rapid disintegration of the tissues, and consequently throw more waste material into the blood, which it is the duty of the kidneys and cutaneous glands

to eliminate; by thus exciting these organs to increased action, many of the rheumatic material is thrown off also.

Blood Letting may be used with great benefit for the local inflammation associated with the disease; but to change the diathesis of the patient by this agent, such an enormous amount would have to be taken, as seriously to endanger life.

Blood Letting is a remedy at all times hazardous, and only to be resorted to, when the disease is more dangerous than the remedy. It lessens the vital powers, thus giving less resistance to the progress of the malady, and interfering very seriously with the convalescence of the patient.

I think my experience since I have been at the Infirmary, will bear testimony to the truth of these facts. All the cases of Acute Rheumatism admitted during the

Liver Oil is recommended for every Chronic disease in the long list of human maladies.

Suppose the rheumatic inflammation attack the fibrous tissues around the valves of the heart, Endocarditis be developed, and lymph deposited, preventing their perfect closure, and permitting regurgitation. How then does nature attempt to relieve herself? When these changes have taken place, death is the inevitable consequence; but Nature does not yield without an effort to overcome this obstruction to the circulation. The heart is called upon to act with increased force and frequency; to do this, Nature supplies the ventricles with more tissue; thus giving them more power to overcome the obstruction, and restore the healthy and normal condition. For in this object she frequently fails; Congestion takes place in all the tissues; [illegible]

[illegible] in the lungs; to [illegible] the thin [illegible] portions of the blood is permitted to flow out; oxygenation of the blood does not take place, and the patient dies of Asphyxia; and overpowered nature rests content with having exhausted all her efforts.

Since my residence at the Infirmary, I have had the opportunity of examining three cases of Aneurism of the Aorta after death. In every case [illegible] layers of fibrine were found deposited in the cavity of the dilatation; showing that nature had attempted to restore the normal condition of the artery. In one of these cases this object was accomplished, [illegible]; and bring to me a highly instructive case. I may be pardoned here forgiving it.

A Sailor was admitted to the house, labring under Chronic Enteritis. He was [illegible]

emaciated; coughing continually, with abundant mucous expectoration; harassed all day by frequent [illegible]; and prevented from sleeping at night by [illegible]; exhibiting in short all the external symptoms of Pulmonary Phthisis. Prof Frick examined his thorax but found none of the physical signs of Phthisis, except a deficient respiratory murmur. The man lingered for a week or two and died. On making a [illegible] examination; the lungs were found perfectly healthy; but just in front of the [illegible], we found a tumour, much larger than an egg; which upon [illegible] into we discovered to be an [illegible] of the arch of the Aorta; the dilated cavity of the artery was found filled with coagulated lymph, leaving its outlet perfectly natural; and rendering it incapable of giving

[illegible] of the [illegible] Aneurism during life. This tumour by [illegible] on the trachea, irritated it, giving rise to the [illegible] and [illegible] expectoration; the exhausting intestinal discharges giving rise to the emaciation and night sweats. This case proves conclusively that Aneurism of the Aorta, may sometimes be spontaneously cured.

We can rarely walk through a hospital at any season, without observing one or more cases of that dangerous disease, Syphilis [illegible]. We are struck at first sight with the debilitated aspect of the patient; the dull and inanimate expression of his eye; the wandering delirium; and small irritated pulse; all indicating some depressing agent acting especially on the nervous centres. What this agent is, we are unable to say. We know it is a poison in the blood

[illegible] these effects, and that is the [illegible] of our [illegible] regarding it. How is nature endeavoring to relieve herself of this morbid material in the blood? By the inflammation which is set up in the glands of Payer, and the consequent diarrhea resulting from it. All medical treatment consists mainly in preventing the diarrhea from becoming so profuse, as to exhaust the patient's strength; and in supporting the system by nutritious diet and stimulants, while these morbid processes are taking place. Treatment directed exclusively to the inflammation in the ileum, as the essential characteristic of the disease, must be necessarily unscientific and unsuccessful. Turpentine, which has been so highly lauded in this disease, acts beneficially, not by its local alterative effect on the inflamed glands, but by its general stimulant properties to

the whole system; [illegible] its [illegible], and thus enabling it to [illegible] the [illegible] effects of the disease.

In the exanthematous diseases, [illegible] by some unknown [illegible], [illegible] -nated with a specific poison, [illegible] to eliminate it by the cutaneous glands; [illegible] the relief to all the constitutional symptoms, after the appearance of the eruption; [illegible] aggravation when it suddenly disappears. By observing these facts, we can [illegible] assist nature in her efforts to [illegible]. We do this, by using those agents [illegible] [illegible] will [illegible] the [illegible] of the [illegible]; such as, Warm drinks, Moderate Temperatures; and by attention to the other secretions.

Why nature should [illegible] in [illegible], to eliminate these blood poisons by the cutaneous glands, and in [illegible] by the glands [illegible] the intestines, [illegible] stress [illegible] to be explained.

[illegible] striking [illegible], [illegible] of [illegible] organs, [illegible] [illegible]; as the kidneys and lungs. When a [illegible] [illegible] [illegible] [illegible] for the performance of its usual function, the organ on the other side generally takes on the duty of both, ~~lungs~~ ~~[illegible]~~, until its function is again restored to health.

Few indeed are the diseases we [illegible] [illegible] observe some effort of Nature for the restoration of the healthy condition; and a large number of the diseases, the physician is [illegible] [illegible] to treat, would probably recover of themselves by rest, abstinence, and proper hygienic precautions.

Very far different were the doctrines taught by the ancient practitioners: then, the results of treatment were exclusively attributed to the virtues of the drug administered; [illegible]

arrogating to themselves, the kind and conservative [illegible] Nature alone performs. Nothing perplexes the ideas of the student of Therapeutics more, than, the recommendation of so many different drugs for the same affection: he is confused by the long list from which he has to choose; when perhaps there is no connection between the diseased condition, and the effects of the remedy. The difficulty seems to arise from this cause. Adrug has been administered; the disease disappears, and as a consequence, the medicine receives all the credit of the cure, and is extolled as a specific in that particular affection; when perhaps the result would have been the same, had no treatment been instituted. At one time Physicians had specifics for every known disease; and gave the remedy regardless of the many different aspects ~~of~~ the same disease frequently assumed. Now, we

have more rational views of Pathology and Therapeutics; every case is considered a problem to be solved, before we can intelligently commence the management; and that we must take into consideration the form the disease assumes, the constitutional peculiarities of the patient, the [illegible], before we can successfully treat it.

To understand perfectly, and to treat judiciously the numerous, multiform, and concealed diseases flesh is heir to, it is not only necessary to understand what disease is, and what are its manifestations; but we must be fully acquainted, with the chemical and physical properties of those ~~drugs~~ remedies by which the [illegible] functions of the body are influenced, and modified; and as far as possible the power over diseased condition.

Hence the importance to the Physician of,

or depreciate in any way the merits of the medical [illegible]: it has been evidently ordained by God, for He has made it both possible and necessary.

He has afflicted man with bodily disease, but he has also given him means by which it may be checked, abated and [illegible]. He [illegible] us antidotes for all the bodily ailments, [illegible] [illegible] condition. He has not planted around us trees of life, whose leaves [illegible] by the instinct of the sick, should heal all diseases; [illegible] He [illegible] [illegible] from which the afflicted might drink, and be restored. He might have done this, but He ordained that man should be the comforter of man.

He has hidden his medicines within the dark recesses of the solid rock; [illegible] [illegible] in the [illegible] [illegible] [illegible];

Secreted them [illegible]
[illegible]; and [illegible]
[illegible]; [illegible]
as he given the ment[illegible].
[illegible]
[illegible], in prepa[illegible]
[illegible]
laborious days; and in a[illegible]
[illegible] to [illegible] nights [illegible]
and study. Let us then seek the Book of [illegible]
and consult its unerring pages. Let that volu[illegible]
[illegible] the [illegible] of [illegible]
our constant study and guide.
[illegible] should [illegible] be [illegible] that [illegible]
[illegible] with the Creator in the distribution of his
[illegible] beneficiaries; representatives [illegible]
[illegible]; and [illegible] are but the instruments
of a superior power — that after all,
"It is God who [illegible] our [illegible],
[illegible] our life from destruction".

[illegible]

Inaugural Dissertation

On

Oil of Turpentine

Submitted to the examination

of the

Provost Regents and Faculty

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Samuel Schofield Smith

Anno domini 1850

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
to fasten its medical properties
and uses upon my mind.
And I will premise here [illegible]
if after having concluded this
Thesis the general principles up
on which the medicine acts
shall have been intelligibly [illegible]
[illegible] my purpose will have been
fully accomplished.
As to the Oil itself it is known to
every body as the Spirits of Turpen
tine and is extensively used in

from the southern part of Virginia to the Gulf of Mexico

- Its mean elevation is about sixty or seventy feet and the diameter of its trunks from fifteen to twenty inches. The leaves are about a foot in length of a brilliant green colour and united in bunches at the ends of the branches

- It is variously called long leaved yellow and pitch Pinn the first however is most appropriate as the two last names are applied to other species

The Turpentine of this Pine yields about seventeen percent of the

[illegible]
[illegible] in [illegible] - in the
Oil in time it is in this way ren-
dered very impure - this resin is
soluble in alcohol and the oil
may be purified by its agitation - with
this article a small portion of the
alcohol is however retained [illegible]
be again seperated by its agitation with
water. The Oil is lighter than
water having a sp. [illegible] of [illegible] at
72° F. It is highly inflammable and
burns with a clear white light. It
boils at a temperature somewhat a-
bove [illegible]° F. If heated in close [illegible]
sels to 482° F it undergoes certain
changes in properties without corresponding

[illegible]
is very slightly soluble in water, [illegible]
soluble in ~~alcol~~ alcohol than most
other volatile oils but readily [illegible]
uble in Sulphuric Ether. Boiling
alcohol dissolves it with facility but
deposits most of it upon cooling.

When swallowed in mod[illegible]
quantities the oil produces a [illegible]
of warmth in the stomach which
followed by a glow over the surface
and after a short time the pulse
are accelerated and this without
especially affecting the [illegible]
of the Brain, If frequently [illegible]
it stimulates the Kidneys increasing
their secretion and often produce

[illegible]
[illegible] of the urinary passages [illegible]
amounting to stranguary or bloody
urine if now continued the urine is
diminished instead of being increas-
ed. it also imparts the odour of
violets to the urine and a [illegible]
chinate smell is of perceptible in the
breath and exhalations from the skin
To the kidneys and urinary passa-
ges the oil has a specific tendency
indeed it is here that its effects are
most obvious after entering the [illegible]
[illegible] will produce its effects
on them [illegible] either by [illegible]
plication or by breathing the [illegible]
of an apartment [illegible]

[illegible] has been [illegible] off [illegible]
of [illegible] has suddenly [illegible]
to clean itself and has become dry and [illegible]
ish the [illegible] at the same time [illegible]
the bowels distended with flatus [illegible]
the patient affected with slight [illegible]
under the use of small doses of the
Oil frequently repeated he will [illegible]
to recover as [illegible] [illegible]
[illegible] entering perhaps slowly but [illegible]
larly into convalescence))

[illegible] the last stage of Yellow fever
and to check the violent vomiting [illegible]
cident to this stage it has been [illegible]
cially used the stomach is at this time
in a state of inflamation approaching [illegible]
[illegible] and it is thought that it is by the

arrestation of this that it operates so [illegible]
tageously producing its alterative effect
upon the diseased surface as well as [illegible]
some degree stimulating the whole Syst[illegible]

It has been strongly recommended
in Puerperal Fever - and in the malig[illegible]
forms of the disease when the blood is
impaired and the inflammation partakes
of the same depressed character [illegible]
in cases assuming a Mild Typhus character
accompanied by intestinal irritation
the Oil might be prescribed with advan-
tage but in all cases of vigorous inflam-
ation in which it might be proper to em-
ploy the Lancet it seems to me the rem-
edy is contraindicated

In [illegible] in its [illegible]

comes perfectly dry, indicating a defi-
ciency of the vital forces if the oil be
used in combination with Laudanum
it will rarely fail in restoring mois-
ture and an otherwise favorable condition
to the tongue

Much good may be expected from
it in the spasmodic affections of the
alimentary canal in flatulent colic
in excessive flatulence without spasm
and in gouty spasm of the stomach

In Tympanites it may be given both by
the mouth and by the Rectum and is one
of the most effectual remedies

In Iritis particularly if of a syphi-
litic taint when from any cause the ex-
hibition of Mercury is forbidden recent

may be [illegible] to the [illegible] which it
said has [illegible] [illegible] the
disease it may be given here in [illegible]
[illegible] doses three times a day and it
is necessary to its beneficial action
that the bowels should not be confined

In dropsies the oil of Turpentine is not often used there are however cases of dropsy in which the urine is scanty in consequence of torpor of the Kidneys and unconnected with inflammation in which it may be useful by employed.

In chronic Diuresis if the excessive diuresis be dependent upon relaxation of the of the Kidneys our medicine by stimulating these organs may

[illegible]
may be had to it here it passes off
by the kidneys impregnates the urine and
thus acts directly upon the bladder.

In retention of Urine arising from
deficient power in the muscular coat
In incontinence dependent upon de-
bility of the Sphincter also in paralysis
of the bladder where the affection is
purely local it may be resorted to
with advantage

In Gravel or Lithiasis the Oil occa-
sionally acts very happily bringing
away large quantities of sandy [illegible]
which is discharged through the stimu-
lant influence of the Oil either acting
directly upon the Uriniferous Tubules

by means of a [illegible] [illegible] [illegible]
[illegible] [illegible] may [illegible] [illegible]
the accumulated and irritating [illegible]

It is also useful in debilitating con-
ditions of the Genital apparatus and in
similar conditions of the [illegible] [illegible]
though it may have no general tendency
to the Pelvic viscera and [illegible]
parts it may stimulate them through
an excitant property radiating from
the urinary organs and influenced by
contiguous sympathy.

In the last and most prostrate stage
of inflamations when the symptoms in-
dicate threatened or existing gangrene this
is the most efficient remedy in [illegible]
with Laudanum — or a salt of [illegible]
[illegible] in all this cases may be from v to xxx ft

& lenitive and effectual appli-
cations to burns allaying the b[illegible]
ing pain and promoting a disposi-
tion to heal - If mixed with some
mild oil and introduced on cot-
ton into the ear it is sometimes be-
eficial in deafness arising from
a deficient or unhealthy secretion of
wax - As a Hemostatic the oil
exerts an extraordinary influence
under certain circumstances but sh-
ld not be resorted to in cases of exces-
sive action - In Hemoptysis it somet[illegible]
acts very promptly and efficiently how
it operates is not well understood [illegible]
have supposed by an astringent prop[illegible]
but it is doubtful if it possesses this

of Uterine Hemorrhage and [illegible]
[illegible] is fully [illegible] relaxed the [illegible]
[illegible] used with success it acts [illegible]
its direct stimulant influence [illegible]
the relaxed organ. Used in all cases
of Hemorrhage either passive or
chronic good may be expected from its use.
In the form of Enema Oil of Tur-
pentine has been employed under
circumstances of obstinate constipa-
tion of the Bowels and particular-
ly of Flatulent Colic. [illegible]
[illegible] effectual in [illegible]
injections of this Medicine It has
been employed in this way in cases of
Ascarides and is considered highly [illegible]
also in Amenorrhoea and to promote
[illegible] Tractions at Childbirth

[illegible] these cases in many of the diseases of the [illegible] Temperature has been beneficially used.

In Neuralgia it has occasionally proved useful especially in cases connected with the sciatic nerve. It is recommended in Hysteria and in Palsy and is thought to be especially applicable to cases of Paraplegia or local Palsy dependent on spinal affection or to the disease when limited to the urinary organs.

In Apoplexy sometimes the debility approaches to syncope in such cases the Oil may be used with advantage both by the mouth and by the Rectum

[illegible] the [illegible] [illegible]
[illegible] has [illegible] [illegible] [illegible]
[illegible] effected by it have been [illegible]
[illegible] the disease is [illegible]
[illegible] upon [illegible] in the [illegible]
[illegible] and then it is cured by the
Anthelmintic properties of the remedy.

I shall only notice one more
disease in which this medicine has
been used and that is Epilepsy
a disease productive of untold mis-
ery and liable to terminate in wo[illegible]
than death. Dr Watson used [illegible]
terms in speaking of it. If I
were [illegible] upon to [illegible] any single
[illegible] from which in ordinary cases
of Epilepsy I should most hope [illegible]

I am aware that I have drawn
but an imperfect account of it
but think sufficient has been said
to show its importance as a reme-
dial agent. It would be very
pleasant to me to make this
more acceptable to you but as
circumstances forbid that. I shou-
ld devote more time to it, I
submit it to you as it is, hoping
that you will manifest your
usual indulgence and not [illegible]
this with a critical eye but pass
its imperfections by. And now
Gentlemen in conclusion allow
me to wish our time honored Ins-
titution unprecedented success for the

[illegible] that [illegible]
[illegible] honorable [illegible]
the Faculty may have and [illegible]
long useful and happy [illegible]. And
for Myself that experience and
observation may ere long give
me a thorough practical know-
ledge of all belonging to medic-
al Science of which now I
have but an indefinite theoret-
ical idea

I am Respectfully yours &c
Samuel Schoolfield [illegible]

1857

A
Clinical Report
Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
James Kinna Waters
of
Maryland
A.D. 1859

List of Cases

Yellow Fever
Dysentery
Rheumatism
Typhoid Fever
Pneumonia
Fracture

[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
always filled with both [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] nearly [illegible]
[illegible], a surgical operation, and here
we see, how an operation is performed,
and when it should be performed,
and when it should not be.

Now in the Study of Clinical Medicine,
it teaches the Student, how to approach the
patient, with that ease and grace, which
becomes the physician, it teaches him the
different modes of detecting disease, the
symptoms they present, the diagnosis from
other affection, the prognosis, and [illegible]
therapeutical application of Medicine to the
cure of disease.

We know that above can
only be obtained, at the bed side, and
I believe it to be perfectly impossible

[illegible] to gain a knowledge of the principles of diagnosis, otherwise than by practical teaching. So it is with the properties of remedies; their chemical character, we may learn in a great measure, from the writings of others, but the action of these remedies upon different constitutions, the modifying influence of diathesis and of diseased action, can only be learned in the hospital wards, and I think this the most important point of all in the education of the medical student. We may be perfect anatomists, excellent physiologist and possess a competent knowledge of the laws of [illegible], we may be skillful chemists and well conversant with the science of botany, and the properties of the Materia Medica, but [illegible] this does not make a physician

Yellow Fever

Wm Selden, a Seaman by occupation aged 35 entered the Baltimore Infirmary Aug 25th 1838. He gave the following history of himself, he had just arrived at Baltimore, from a voyage, from the West India Islands, up to which time, he had enjoyed excellent health. this was on the 19th instant.

On the evening of that day, after feeling languid, he was seized with a severe — chill, accompanied with intense pain in the back and head, this was followed by symptoms of fever; a few days after that, he had another chill, after which there was no reaction. He was then brought to the Infirmary. He presented then the following Symptoms. Great prostration, cold extremities, comatose and wandering in his mind, suppression of urine, having passed none for two days, he was greatly troubled with hiccough, his skin was yellow or rather of a bronzed aspect,

the tongue moist and covered with a white fur, afterwards it changed to a brown colour, respiration hurried, great irratability of the stomach, so much so indeed, that he ejected food and even drink, almost as soon as swallowed. the patient appeared anxious, and exceedingly restless, his intelligence was somewhat impaired, but it only amounted to a slight mental derangement, as the patient gave intelligent replies, when aroused. There was also some discolouration of his eyes.

The symptoms of this case, indicated clearly, some blood poison, acting as a sedative to the whole nervous System.

Prof Toick, thought that it was either a case of Pernicious or Yellow fever. But from the suppression of urine, and the history of the case, he was of the opinion, that it was the

latter. but said that it was too soon in the
desease, to pronounce with certainty.

In his treatment, he steered between
the two deseases. He therefore ordered Sulph
Quinia grs iv every four hours, this
being the remedy, if it was Pernicious
fever, also ordered him the Mur Tinc Ferri
gtts xx every four hours, this being the
remedy, if it was Yellow fever. He also or-
dered him Brandy, to be given during
the day. On the following day, he appeared
to be much worse, the large amount
of stimulants, we gave him, seemed
to increase the force of his Pulse, his
surface was still very cold, his eyes
very yellow, and what was singular
about them was, that instead of looking
dull and inanimate, as is generally
the case, in low forms of fever, they
were bright, and animate, as if he was
labouring under some mental excitement

he wanted to get out of the bed, and walk about the ward, saying that there was very little, the matter with him.

Next day, symptoms of greater prostration, and about 4 O'clock, that evening, he commenced vomiting dark brownish fluid resembling coffee grounds, which is characteristic of Yellow fever. Prof Frick pronounced it a well marked case of the desease. He discontinued the Sulph Quinia and kept on with the Mur Fric Ferri.

Prof Frick remarked that in Erysipelas there is an activation, of the blood globules, and that the Mur Fric Ferri, had been found, to act almost especially in that desease. Now in Yellow fever, there is also an activation of the blood globules, and he thought, that the Mur Fric Ferri would act beneficially in this desease. We know by experience in Erysipelas, that the Mur Fric ferri, causes the blood globules to

return to their natural form, and I think it, very fair to infer, that in Yellow fever, where the blood is also altered, that the Mur Zinc Ferri will have the same effect. A sinapism was applied to epigastrium, and large quantities of brandy and water given. The patient did not respond to the treatment at all, but continued to grow worse and worse.

At the suggestion of Dr Van Bibber a blister was applied to the abdomen. His hiccough was the most distressing symptom with him, he still kept on vomiting, from morning until night. The patient now began to fail rapidly, the skin became cold and clammy, an extremely offensive odour exhaled from his body about ten O'clock the patient died. This was on the evening of 27th just four days after his entrance. Prof Frick examined

the black vomit under the microscope
The blood globules, instead of being
round and spherical, as they are
normally, were corrugated and wrinkled
as if their cell wall was contracted.

Post Mortem

The students, of the Baltimore Infirmary
held a post mortem, and found the
mucous membrane of the stomach, very
much thickened and softened, and
the cavity filled with black vomit.

The liver was found to be very dense
and of a beautiful straw colour, all
else was found perfectly healthy

Dysentery

Hannah Pendergrass was admitted into the Baltimore Infirmary June 8th 1858. She was suffering with "Cataract" in both eyes. She gave the following history of herself. she stated, that she lived in Oakland, Allegany Co Md. She had been in this country, some nine months, and has not seen out of her eyes for several years. Prof N. R. Smith operated on the left eye, July 14th 1858. She appeared to be doing very well, for a week or two after the operation, when she was suddenly attacked, with Acute Dysentery. She was very much emaciated, and hardly ate food enough, to sustain life, she also drank, a great deal of Ice water, which all helped, to bring on her disease

Her discharges were of a serous character at first, but afterwards, were small, bloody and containing mucous. Dr B. B. Smith, the attending Surgeon of

the house, ordered her the following prescription

℞ Acetas Plumbi grs V
Opii pulv gr 1/2
ft pil One every three hours.

This afforded her no relief, if anything increased her discharges. She now began to vomit excessively. The above was stopped and the following given her, to allay the vomiting, and excessive nervous action.

℞ Hydrocyanic Acid gtts viij
Morphiae Sulph gr j
Emulsion Gum Acacia ℥j
ft Sol A Tea Spoonful every two hours. This had the effect, of allaying the vomiting, but her discharges were still increasing. Dr B. B. Smith also, ordered her the following ℞

Sub Nit Bismuth grs iij
ft pulvis One every three hours.

This afforded her no relief, her desease was getting worse and worse. she now

began to sink very rapidly Dr B. B. Smith then gave her over to Prof Frick

She presented then, the following symptoms Great pain on pressure, over the stomach, great deal of straining, on going to stool, involuntary evacuations from her bowels, which were of a dark greenish colour, she was reduced to a condition of extreme Prostration, a slow and feeble pulse, low and muttering delirium, subsultus tendinum, skin cold and clammy, in fact, all the symptoms of a person in "Articulo Mortus." Prof Frick said that her disease had changed to "Enteritis"

He therefore ordered her the following

℞ Vit Argenti gr ½
Nux Vomica gr i
Opii pulv gr ¼

℔ Pil One every four hours. He also ordered her, one pint of Wine, and farina diet. The effect of this prescription

was magical, in less than twenty four hours, her condition was wonderfully improved. And in ten days she was walking about her room & Prof W. R. Smith operated on the other eye with entire success and she left for her home entirely recovered.

Rheumatism

Jacob Fenestern aged 28. Occupation Druggist, entered the Baltimore Infirmary on the 25th of June 1858. He gave the following statement, on the 21st of June he was first attacked with all the symptoms of acute Rheumatism, and that he could not move himself without, suffering a great deal of pain

When he entered the Infirmary, he presented the following symptoms. Severe pains in all his joints and limbs. with inability to move or assist himself, he had a high fever, quick strong and bull pulse. His general condition was very good, and not at all prostrated, he passed very little urine which was very high coloured and acid. Prof Frick ordered him the following Rx Bi-carb Potass grs X

Nit Potass grs V

Aqua Pura ℥ij To be taken

every four hours also Pulv. Doveri grs V every four hours, with an anodyne at night. Prof. Frick did not give the alkali, with an idea of neutralizing the poison of Rheumatism, but simply to produce waste of tissue, as all the alkalies do, and thus carry off the morbid material deposited therein, this wasted material being thrown into the blood, is eliminated by the kidneys, and if we examine the urine, before we put a patient on this treatment, and examine it after he has been on it a few days, we will find the specific gravity much increased in the latter, and we will also see the patient emaciate under it. Under the above treatment, he improved so rapidly, that in three days he was convalescent on the fourth day, he could walk about his room, and

in six days, he had entirely recovered. She passed the first two or three days two quarts of urine, which was very acid, and of the specific gravity Eighteen. Prof. Frick stopped the alkalies, and gave him Cod Liver oil and good nutrious diet, to build him up. He stayed in the house until the 8th of July, when he left entirely recovered. I think I have seen, some thirty or forty cases of this disease, during last Spring and summer, and all treated on the same principles, with perfect success, the patients generally recovered, in from two to three weeks.

Typhoid Fever

Hannah, a bright mulatto girl, aged 16 and a private patient of Prof Chew, entered the Baltimore Infirmary Aug 29th 1858 labouring under Typhoid fever.

Her master informed us, that she had been sick, about a week before her entrance, but, as she complained very little, no medical aid was rendered. When she entered the house, all the symptoms were very well marked. She had that peculiar stupid, apathetic aspect, of typhoid fever patients, a tympanitic and painful abdomen, a gurgle could be distinctly heard, in the right Iliac fossa upon pressure, and a soft, frequent, and weak pulse, also some diarrhoea.

Some time after her entrance, Symptoms of Bronchitis, came up, namely, cough and mucous expectoration, and moist sounds, could be detected upon aus-

-cultation. Prof Chew ordered her the following Prescription: ℞ Bi-carb Soda ℥ij
Chlorate Potass ℥ß
Syrup ℥ß
Aqua ℥vß
ft Sol a Table Spoonful every two hours. also ordered her the following ℞ Liq Ammonia Acetas ℥ijß
Aqua ℥v
ft Sol a Table Spoonful every 4 hours. Under this treatment, she made no improvement, and on the following day, Prof Chew ordered for her a solution of "Citrate Potass, in place of the alkaline He also ordered her wine, with the above prescriptions. She was ordered to have Paragoric, at night, if she was restless, and did not sleep, and the quantity of wine increased. But this treatment had no effect whatever, upon her desease, she gradually, sank into

a state of extreme prostration, her pulse could scarcely be felt, and was dicrotic. Sordes, now commenced, to form about her teeth, her tongue, was extremly dry, and the lymphanites, increased, and she became comatose, and wandering in her mind. Prof Chew now ordered her "Oil Turpentine" gtts X every four hours, in milk, and as much wine, as she could take, also Beef Tea and Arrow root. This seemed to cause an abatement in all the symptoms for a few days, when they returned, with increased force, and she died Sept 11th just twelve days after her entrance.

We made a post mortem Examination, and found the ulcerations of Peyer's patches beautifully marked.

Pneumonia

Mary a coloured girl aged 16 Resident of St Marys County Md. Entered the Balto Infirmary Nov 17th 1858. Suffering with Chronic Ulcers on her legs. She stated that She had the ulcers, ever since, she was small and that they were entirely healed up.

Prof N R Smith ordered her the following ℞ Nit Acid gtts X

Aqua ℥j.

ft Sol Use as a wash to the ulcers also dress them with "Turners Cerate" The ulcers began to heal very nicely, under the above Prescription, when she was suddenly taken down, with some other disease.

She presented the following Symptoms. Violent pain in her side, Skin hot and dry, her intelligence somewhat impaired, Pulse full and dicrotic, tympanites and a slight gurgle in the right iliac fossa, tongue moist and covered with a white fur. She had that dull, apathetic look

of typhoid fever patients. From the Symptoms she presented, I thought she had that disease. I questioned her about the condition of her bowels, she told me, that her bowels had'nt been opened for two days. I ordered her a dose of Castor oil which did not relieve her, I then ordered her an Injection of Warm water and salt, which had the desired effect. I then thought that the Symptoms she presented, might be owing to her bowels not being opened, but all the symptoms remained very much the same.

Prof Smith handed her over to Prof Chew. That learned and skillful Physician examined her, and pronounced her disease "Pneumonia" She presented then the following Symptoms. Violent pain in her side, high fever, pulse small and weak, tongue moist and covered with a white fur, respiration hurried,

violent cough, which was always increased when she sat up, and was examined. Her expectoration was of a rusty colour. Physical Sounds, gave complete dullness on percussion. Prof Chew said that the left lung was hepatized. I could distinguish the Crepitation, which was not so fine as in the first Stage of this disease. It seemed to me, to be a little rougher. I could distinguish Bronchophony also, but the bronchial respiration I could not, which, I suppose, was owing to some obstruction of the bronchial tubes entering the lung.

Prof Chew ordered her the following prescription Rx

Gum Acacia ℥ij
Syrup ℥j
Aqua Cinnamon ℥j
Tart Antimony & Potass grs iv
Aqua ℥vj
M Sig a tablespoonful

to be taken every four hours. This was given for its sedative, and Expectorant effect. This seemed to relieve her somewhat, but did not show any improvement she continued very much the same.

Prof Chew then ordered the following to be given along with the "Antimoney"

℞

Mass Hydrag grs XVj
Creta prep ℈ij
Specac pulv grs ij
Sacchar Alba ℈j
Cinnamon pulv grs viij

Ft pulvis viij One every three hours. This was given for its alterative, antacid, and diaphoretic properties. The patient did not improve any under this. She had now several hemorrhage from her nose, Diarrhoea was also set up. Chalk Mixture was ordered for her, with ten drops of tinc opii in each dose. The patients right lung now became

involed. This was also hepatized. Physical sounds were the same as in the other lung. She was now in a very bad way, her pulse was feeble, cough increased breathing much more difficult, expectoration more abundent. Skin hot and dry, tongue thickly coated &c.&c. Prof Chew continued the same treatment. She did not improve much, she was getting very weak from the Diarhoea, she was labouring under. Prof Chew now ordered the "Antimony" to be discontinued. She was now getting weaker and weaker, she began to sink, in a low typhoid condition, her pulse became small and weak, her skin very dry, and hot, her tongue covered with a dark brownish fur, her teeth, gums, and even lips were covered with sordes, her evacutions were dark and very offensive. Prof Chew ordered her the

following Inscription ℞

Carb Ammonia
Gum Acacia āā ʒj
Syrup ℥j
Comp Tinc Lavander ʒij
Aqua ℥vfs

ft Sol A Tablespoonful

every hour. This was given to stimulate her. For the first day or two, she did not show any signs of improvement, but afterwards, she gradually began to improve, We continued the Powders, along with the above solution, and in four or five days crepitatio redux commenced, her left lung, gradually cleared up, until the healthy respiratory murmer took place. She was now getting stronger, her right lung now commenced to clear up, until the healthy respiratory murmer took place. Dr Chew had no idea of curing this girl, but under good treatment, he saved her, from the jaws of "Death."

Fracture

John Kelly, a little boy, aged 10 years entered the Ballo Infirmary Nov 18th 1878 Suffering with a compound comminuted fracture of the right leg. He states that he was sitting on a curb stone, looking at some men, who were hoisting up a large stone, when it suddenly fell, and struck his leg. He was taken to his home, where several Physicians were called in. They stated that his leg would have to be amputated. His Father objected to it, and said that the boy, should die first.

He was then brought to the Infirmary Dr James A Butler immediately applied Prof N. R Smith "Anterior Splint" The moment it was applied, the boy felt great relief, he experienced no pain whatever. That night he was a little delirious, which however did not amount to much. This is certainly

one of the best splints that has ever been invented. It is very simple in construction, cost but little money, and is easily applied. I think it is just what the Profession needed. What is the use of strapping a man down in a tremendous, heavy fracture box, when we can make our patients feel more comfortable, and easy, by applying the "Anterior Splint." We generally try to make our patients feel easy and comfortable while under our charge.

Now in fractures of the lower extremities, we have just the thing. What is it? Why it is the "Anterior Splint" Now suppose this boy's leg had been put in the fracture box, I do believe if it had, that in five or six days, it would have been amputated. Why? In the first place, his leg would have been strapped down in a tremen-

-duous heavy fracture box. In the second place, he would be confined to one spot, and thereby give rise to bed sores; and if he moved about in his bed, he would disturb the fractured part. In the third place, you would have a great deal of pus accumalated in the box, you would have to take all the bandages off, and let the sides of the splint down, to get at the wound, and before you cleaned and dress the wound, you would have to clean the fracture box, where the pus accumulated.

Now in the Anterior splint it is very different, all that we have to do, is to take off one bandage and we see the wound, we can clean and dress it, without the least disturbance to the fracture whatever. The leg is swung up to the ceiling, by means of a pulley. The patient can

move about in his bed, from one side to the other, without any disturbance to the fractured part. Now Gentlemen you can see the advantages this splint has. I dont pretend to say, that there are not splints, just as good as this. I believe the fracture box, has turned out, just as good legs as this has. But that is not the thing. We want to give ease and comfort to our Patients, and here we have it.

We had this boy's leg in this splint, for Six weeks, and at the end of that time, it was firmly united. We then took it out, and applied the Starch apparatus, to give more support to the limb, and enable the boy to walk about the room. This boy left the house entirely recovered. Taking every thing into consideration, the condition of the fracture, and then condemned to be amputated it is certainly a great triumph for the "Anterior splint"

An

Inaugural Dissertation

on

Opium.

Submitted to Examination

to the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Charles Irving Wilson

Washington

D.C.

Opium

Among the very extensive and [illegible] collection of remedial agents with which our Materia Medica abounds, [illegible] if any can rank above this, the subject of my Thesis in importance, in its variety of applications and frequency of use; so much so indeed that it can be said to stand at the very head of the catalogue of Medicines.

Opium is the concrete juice of the Papaver somniferum, or the poppy, an annual plant inhabiting Asia and Egypt. Its juice is collected and after concreting into proper consistence is made up with or without addition into masses of different shape surrounded by leaves to prevent them from adhering together, and [illegible] sent into market.

There are several varieties of Opium; viz; The Turkey, Egyptian, East Indian, Persian and European. The [illegible] being the only varieties with which we commonly

meet [illegible] the most valuable we shall [illegible] of these varieties. The [illegible] which is the most valuable [illegible] in [illegible] of irregular size and shape, the weight seldom exceeding two pounds, usually flattened rounded cakes. The exterior is surrounded by leaves of some native plant, generally the capsule of a species of Rumex, to absorb moisture and prevent adhesion. It is generally hard on the surface but soft and tenacious in the interior. There are two varieties of Turkey opium, [illegible] names being derived from the ports from which they are exported. The first and most valuable is the Smyrna Opium which is most frequently met with in this country. It has, besides the characters spoken of the peculiarity when cut or broken to show minute shining crystals or bears which resemble small [illegible]. The best of this variety is the most valuable met with and yields at least eight per ct. of the active ingredient morphia

The [illegible] of the ingredients [illegible] different varieties [illegible] from [illegible] to thirteen per cent. The [illegible] is characterized by an entire [illegible] or [illegible] found in the Smyrna. The Egyptian Opium occurs in flat rounded cakes of different sizes [illegible] wrapped in Poppy leaves, it is hard and [illegible] with a smooth fracture. It usually contains less morphia than the Smyrna and hence is not as valuable.

The Properties of good Opium in general are, that it is of a reddish-brown color in [illegible], [illegible] yellowish-brown in powder. Its odour is strong and narcotic, its taste somewhat acrid, bitter, and nauseous, and when chewed irritates the mouth and fauces; when drawn across paper leaves an interrupted stain of light brown color. Water, alcohol and the dilute acids extract its virtues.

The Composition of Opium is very complex containing a great variety of ingredients, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] for [illegible]

It contains Morphia Narcotina [illegible]. The [illegible] and some other ingredients, [illegible] with [illegible] acid which is combined with the Morphia which is the most important and more frequently used as a medicine than the other ingredients. Many substances produce precipitates with this drug (Opium) but do not affect its active principles; the alkalies throw down its alkaloid, and gallic tannic acids and some other astringents throw down insoluble precipitates, but which can be redissolved by excess of alcohol or acids.

The tests of Opium are many; it reddens litmus paper, becomes turbid with a solution of amonia, reddened by Nitric acid, and precipitated by an infusion of Galls. Its quality is generally judged by the quantity of Morphia it contains, of wh. good Opium should yield from ten to twelve per cent of impure Morphia. The Effects of Opium upon the system is that it stimulates the part to which it is applied, and also the circulation,

[illegible] with the [illegible] system, [illegible]
the brain. The effects upon [illegible] system
when taken internally are, warmth or weight in
the stomach, followed by fulness in the head,
but which is soon followed by an [illegible] and [illegible]
with and elevation of the moral and intellec-
tual faculties which are carried to the highest
point possibly and present to the imagination
some of the brightest and most beautiful im-
agries, as has been proved by some of our writers,
as De Quincey, who always wrote under the in-
fluence of this drug and to which he has ded-
icated one of the rarest and most sublime
passages ever written. It is unlike alcohol
in its effects, not having any of that wild and
delirious excitement, but on the contrary gives
and emotional and intellectual elevation to-
gether with muscular activity. The effects
generally pass of quietly and calmly into a
pleasant repose. It also diminishes sensibility
even before the soporific effect. It increases the

circulation in stimulant doses. Most of the secretions are diminished, sometimes all; the mucus always, which accounts for the dryness of the mouth and fauces when chewed. In fact it may be said that it diminishes all the secretions to some extent, and hence of course the bowels are constipated partly on this account and partly by paralysis of the muscular coat. Nutrition much diminished, though emaciation does not always take place.

Idiosyncracies should be noticed, since it produces different effects upon different persons; some being able to withstand enormous quantities whilst others cannot bear the least, which can sometimes be remedied by changing the preparation. As a general rule the stimulant effect is kept up by diminishing the dose and shortened by an increase, whilst the reverse is true of the narcotic effect. The system soon becomes habituated to this medicine and by frequent use enormous quantities can be taken.

Poisoning is often produced. This drug in large [illegible] which acts as usual, first stimulating and then drowsiness and sleeper follow. The patient becomes, [illegible] with slow and stertorous breathing, with dark suffusion of countenance with pulse generally slow, full, and strong, contracted pupils, with lack of expression, with at least coma comes on in from four to eight hrs. Convulsions sometimes occur with relaxation of the voluntary muscles, and then follows general prostration and profound coma with death, which is supposed to be caused from the general prostration of the nervous system. The quantity to produce this effect varies in different individuals. The morbid appearances after death are congestion of brain with serous effusion, and congestion of the lungs; livid hue, and liquid blood.

Treatment – There is no antidote and hence we can only evacuate the stomach and support the system. The first is to be done by emetics; the best is which are sulphate of zinc,

and unstable [illegible] for [illegible] pain. It is also used as an antiperiodic where it is found very useful by cutting off a paroxysm. Also used as an indirect arterial and nervous sedative. For an anodyne effect it is particularly useful by congesting the cerebral centers and thus deadening sensibility, and it also relieves the pain which is the cause and thereby produces an anodyne effect. It is also [illegible] useful in [illegible] and muscular contraction and relieves the pain by depressing the susceptibility of the nervous centers which probably have their effect upon the voluntary muscles. To produce sleep is one of its most important indications, which it can do in two ways, both by relieving pain and by producing a soporific effect, without relief, by deadening the sensibility by congesting the sensorial centers. It is also used in suppressing morbid discharges through its action of diminish-

[illegible] the secretions generally.
The [illegible] for the use of this drug are in a high state of febrile excitement with determination of [illegible] head, in hemorrhage, and inflammation of the brain and in early stages of acute inflammation. Also in inflammation of the mucous membrane, in constipation of the bowels, [illegible] digestion, and [illegible] function generally and [illegible] in cutaneous eruptions.
Special applications. The drug has a variety of special applications some of which I shall enumerate. In idiopathic fevers it is indicated for several functions it performs. It is useful as a stimulant in the low forms with weak pulse, both to improve the circulation and stimulate the cerebral centers when debilitated, as they are always in low forms. It also allays the attending excitement, general uneasiness,

with [illegible] up, [illegible] the attending [illegible]
[illegible] [illegible] [illegible] [illegible]; [illegible] in mind
[illegible] its contraindications. It also allays
[illegible] nervous disorder, and is good to cut
[illegible] the paroxysm when administered in the
[illegible] stage. In fact it allays quite all the
[illegible] of fevers. In inflammations
of the acute form it is beneficial, if admin-
istered early, by allaying pain, producing
[illegible] up, and reducing the excitement by its
sedative action, and hence of course requires
[illegible] doses. It is, when properly applied,
probably useful in quite all the inflam-
mations except those mentioned in the
contraindications, but must sometimes
be combined with other drugs to make
it efficient. Useful in gastritis, peritonitis,
hepatitis, and most all the inflammations,
[illegible] not in every one, even where it is especially
indicated. It is beneficial in vascular
and nervous irritation, also to relieve

nausea and [illegible] the [illegible] caused by [illegible] dicines. Particularly in neuralgic pains where it [illegible] pain and [illegible] and breaks up the [illegible]; but to accomplish this it requires considerable quantities, which have to be guarded against to prevent the evils arising from over indulgence. In painful spasm, either external or internal, it is beneficial and must be administered accordingly. Various spasmodic and convulsive affections require this drug which is very beneficial. In nervous depression and some forms of insanity it is beneficial, also in delirium-tremens, where it is a most efficacious remedy. In morbid discharges this drug is one of the best which probably acts by its indirect sedative action, as in diarrhoea and cholera in all its forms, except cholera infantum. In most hemorrhages it is indicated for several effects it has. Also in excessive mercurial

salivation, and in excessive mucous secretions when combined with other drugs. Also useful in a great many other conditions and diseases but which time and space will not allow me to speak of, although probably as important.

Administration. Opium is administered variously, depending upon the purpose to be fulfilled, remembering the idosyncracies and habits of the patient. The medium dose for an anodyne effect is about one grain. About this quantity should be given as a commencing dose to a person whose habits are unknown. For a stimulant [illegible] a tip quantity as from an eighth to half of a grain repeated so as to keep up the impression. For a nervous stimulant probably still less. Care should be taken in administering this drug to children, depending upon their age to regulate the dose, which for some weeks should not exceed a fortieth of a grain, and from a twentieth to a tenth of a grain, to

a child of one year, and [illegible] at to [illegible] [illegible] according to age. The dose may be taken in field powder, [illegible] or [illegible]. May also be used as a [illegible], and as an enema which at first should not exceed twice the amount taken by the mouth. Its liquid preparations are also much employed of which I shall not proceed to speak. Preparations. One of the most important of these from its frequency of use and ease of administration is the Tincture of Opium or Laudanum, as it is commonly [illegible]. It is prepared by macerating two ounces and a half of Opium in two pints of Alcohol. This preparation should be kept in well stopped vials, yet not too long, as the Alcohol evaporates and leaves the pure Opium and makes it dangerous of administration, especially to children. The dose of the Tincture is about [illegible] minims [illegible] twenty five drops which is about equal to one grain of Opium.

A fluid-drachm or teaspoonful contains about one hundred and twenty drops and a minim is equal to about two drops. This is often used as a local anodyne, and is made into the form of a liniment.

Camphorated tincture of Opium or Paregoric is another useful and popular preparation which is made by macerating Opium, camphor, benzoic acid, oil of anise and honey in Alcohol diluted. Opium is the chief active ingredient and camphor next. It is much used when small doses of Opium are needed and is very useful for administration to children to relieve a variety of affections and produce sleep. It is much used in cough mixtures and is generally acceptable to the stomach. A grain of Opium is contained in half an ounce of the preparation. The dose for an adult is about one drachm, whilst for an infant in the first or second year it is from three to twenty drops after which it is regulated by the age.

The Acetated Tincture of Opium is made by macerating Opium in a mixture of vinegar and alcohol. This is a new preparation and is not much used except where other preparations disagree with the patient. The dose equal to a grain of Opium is about ten minims or twenty drops. Wine of Opium is prepared by macerating powdered Opium with cinnamon and cloves in sherry wine. It is not much used, having less alcoholic strength than Laudanum and of course is more agreeable to the stomach. The dose is about twenty drops. Vinegar of Opium or Black drop is prepared by macerating Opium, nutmeg, saffron in dilute acetic acid and afterwards percolate the mixture with the same menstruum. It is stronger than Laudanum and sometimes preferable. Its dose is from seven to ten drops.

We also have solid preparations of this drug as Pills of Opium which, containing one grain,

are made by being rubbed with soap or some other excipient. Compound pills of soap are but Opium rubbed up with soap containing about one grain of Opium to five of the mass. It is so called to disguise its composition from the patient and is also useful to administer small doses of Opium. Powder of Ipecacuanha and Opium or Dover's powder is another preparation much used but chiefly as a diaphoretic. It is composed of one part of Opium, one of Ipecacuanha and eight of the Sulphate of Potassa. The latter ingredient is simply to enable the two vegetable ingredients to be more intimately incorporated. It is much used and the dose of which is ten grains, which contains one of Opium and one of Ipecacuanha. A Confection of Opium is prepared by mixing up the drug with honey and the aromatic powder and is convenient to prescribe small doses. One grain of Opium is thirty six of mass.

We also have an Extract of Opium which is a watery extract and contains only principles soluble in water. It is sometimes advantageous where the preparations are not. The dose is one half that of Opium.

Opium plaster is also met with and is prepared by mixing powdered Opium with boiling water, burgundy pitch and lead plaster and then evaporating the moisture. It may be used as an anodyne to allay fixed pains.

Morphia - This is the active ingredient of Opium and is extracted in several ways, the best of which is to macerate the Opium in water until exhausted, adding alcohol precipitating morphia by a solution of ammonia and purify it precipitate by a solution of boiling alcohol, then filtering, when upon cooling will deposit crystals of Morphia containing, narcotina not from which it can be separated by ether. Morphia is in small shining crystals crystals without smell, of a bitter taste.

[illegible]

[illegible] the [illegible], the [illegible],

and [illegible], [illegible]

of Potassa [illegible] dissolve it. It affects the [illegible]

[illegible] like [illegible], and forms [illegible] salts

with [illegible]. Nitric acid reddens

the salts which afterwards become yellow.

[illegible] from them [illegible]. Pre-

cipitates of these salts are produced by the

pure alkalies and their carbonates. Astringent

substances [illegible] a [illegible] of the [illegible] salts.

Morphia though the active ingredient of Opium

does not produce the desired effect alone, as is

proved by the effect produced by a certain quantity

of morphia from a certain quantity of Opium

which is not the same. It has pretty much

the same anodyne and stimulant effect

as Opium but does not [illegible] the secretions

or constipate so readily. This substance is

seldom used its salts being preferable as the sub-

stance itself being nearly insoluble in water,

[illegible] salt is [illegible] by the acids of the stomach. The dose of either of the Salts equal to a grain of Opium is about [illegible] of a grain. The most common salt is Sulphate of Morphia which is prepared by mixing Morphia gradually with dilute sulphuric acid until it is dissolved and then evaporating to crystallizing. It is in white small and light scales, soluble in water, and slightly in alcohol. It may be given in dose from one eighth to one fourth of a grain. The officinal solution of the salt is prepared by dissolving eight grains of the salt, in a half a pint of distilled water, and hence containing one grain of the salt in an ounce of the mixture. Acetate of Morphia. This is prepared by Morphia, being deprived of Narcotina, mixed with water and acetic acid being [illegible] added until it is dissolved. It is, then evaporated, dried by a gentle heat and rubbed into a powder. It is soluble in alcohol. The dose is the same of the Sulphate.

Muriate of morphia is prepared like the sulphate. It is in fine, white, [illegible] crystals, inodorous, litter, and soluble in water and alcohol. It is distinguished from the sulphate by affording with nitrate of silver a precipitate insoluble in nitric or muriatic acid but soluble in excess of ammonia. The dose is the same as the sulphate.

Narcotina and Codeia the two other opiate alkaloids though having peculiar properties and virtues, yet are so very little used and so little certainty known of them that I shall not consider them at length. Indeed there is such a variety of opinions in regard to their use and action that we could not tell upon whose authority to rely upon

An Inaugural Dissertation On Menstruation.

Submitted to the Examination of the Provost, Regents, and Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine by

Ephraim Hopkins Jr.

Menstruation.

I now commence one of my
[illegible] as a medical student or as a
candidate for graduation, namely the writ-
ing of a thesis. You will not be
surprised when I say that of all the
[illegible] [illegible]

that I submit it to the [illegible] criticism of the Faculty of the old University of Maryland. — But before discussing the subject which has been chosen for the theme of my essay it may not be amiss to make a few general remarks [illegible] to the science of medicine. Its beauties [illegible] by those of any other science in existence, yet its fruits hang in rich clusters high on the mountain top far above the paths of folly [illegible] and idleness, and he who expects to arrive at the top must elevate his head above these and diligently press onward onward onward over the rugged cliffs, and briery paths that lead thereto; his heart [illegible]

[illegible] Excelsior. But are its beauties the less attractive or its fruits the less rich on account of the difficulty of obtaining them? Certainly not, we value them like the diploma we hope to obtain by the labor we have undergone in procuring it. Fold would lose its value and the diamond its lustre as ~~plentifully~~ could we dig it out of the earth as plentifully as iron or toss them about like the pebble on the beach.

The field of investigation too is extensive, there is scope enough for the most profound minds for the longest period allotted to man on earth. Physic in its primary practical divisions embraces seven sciences, each presenting

its own peculiar points of interest thus alluring the minds of the wise and great to search out their hidden treasures.

I well remember whilst conversing with a physician in the country who had obtained a large practice, a remark he made: Said he, calling me by name, I wish I had studied law instead of medicine; why Doctor, said I, is practicing really so laborious? No, not that alone he replied, but a man would then have had more scope, more room for study. The effect this reply had upon my mind in forming an opinion of the man can readily be imagined. It is not well I am aware to mention the errors and expose the ignorance of our brethren but it is between ourselves. Let us then

diligently press onward being assured that there is room enough for each and all of us and that industry and virtue will bring their own sweet reward.

Menstruation as I have before said, is the subject upon which I propose to make a few remarks. It is one of the subjects upon which science has so recently shed its light, thus enabling us to trace from cause to effect one of the most beautiful physiological processes in nature. In selecting this subject I have been influenced by the universality of its occurrence by the frequency with which physicians are called upon to relieve the various derangements of the function; and by the necessity which exists for us to become

acquainted with its physiology, before we can appreciate the various deviations from health.

Menstruation is a function peculiar to the human female of all countries and in all ages of the world. And when we consider that the cause of it until within a comparatively recent period remained unknown and that they were aware that their health beauty and perfection in a great measure depended upon a due performance of the function we will not be surprised to learn that many superstitious notions existed in regard to it, and that many still linger even among the higher classes of the community. It will only be necessary for us in an article like the present to refer to a

two of them as constituting a part of the history of the catamenia. Thus it is recorded by one of the older writers that plants with which the menstrual fluid comes into contact die; seeds will not germinate if deposited in a soil upon which it has fallen; and that dogs which taste it are attacked with hydrofobia. It is scarcely necessary to say that with a more extended and minute observation our conclusions are altogether different.

Menstruation consists essentially in the periodical discharge of blood from the genital organs which to be sure is more or less mingled with mucus and epithelial scales. The character of the discharge varies according to the discharge period at which

it is examined for instance in the beginning it is mingled with a greater amount of mucus while at a later period it resembles more nearly the blood drawn from a vein or artery. It is not coagulable; and the absence of this property has been attributed to the want of fibrine in the discharge; — But this by actual experiment has been found to exist in it. How then shall we account for this phenomenon? We have only to return to the general law that the secretions of all mucous membranes covered by a cylindroid epithelium are alkaline, while that of those covered by a squamous epithelium are acid. Now being aware that the latter condition exists in the vagina and also that

acids prevent the coagulability of fibrine we have the reason plainly set before us namely that it is the admixture with the vaginal mucus. As a further proof of this in menorrhagia in which the sanguineous discharge is very much increased we almost invariably find clotted or stringy blood owing to a too great disproportion between the amount of uterine and vaginal discharges.

We come in the next place to a consideration of the cause or causes of this periodical discharge, a subject which has until recently been involved in much obscurity, and one which has for many years occupied the attention of the most eminent obstetricians of all countries. It is a subject which has given rise to the

most lively discussion and in the absence of positive knowledge many theories have appeared which as usual served rather to retard than accelerate the progress of science. One of these is that it is caused by a general plethora which made it necessary that the system should dispose of the superfluous amount of blood and that nature saw fit to eliminate it in this way. During pregnancy it went to the nourishment of the foetus. This hypothesis however erroneous is in itself beautiful, and we should rather rejoice that we live in an age in which the light of science shines more vividly by which we are enabled to see truths which to our predecessors were shrowded in mist, than laugh at their folly. We are

[illegible] generation." Other theories might be adduced but it would be only a useless waste of time to mention them. The cause however is conclusively proved to be the evolution of the Graafian vesicle. As an evidence of this the "post mortem" examinations of the bodies of those women who have died during menstruation; the absence of the discharge in those women who from a peculiarity of conformation or as the result of a surgical operation are destitute of ovaries; and finally analogy leads us to the same conclusion. The essential cause of menstruation then resides in the ovary, the anatomy of which and the formation of the Graafian vesicle will not be considered in a paper like the present.

said to last from one or two days up to eight or ten but probably the most usual period of duration is from three to four days. Cases sometimes occur in which the catamenia continues to flow only an hour or two and others again where it lasts fourteen or fifteen days; such cases however are of infrequent occurrence and when they do happen may in the majority of instances be attributed to some uterine disease.

The quantity of blood lost like the duration of the flow is subject to variation. It is difficult to estimate the amount we having generally to arrive at or proximate the truth by the size and number of the cloths soiled. The quantity of the discharge is considerably in-

fluenced by the diet, mode of life, climate &c. Those who live luxuriously and take but little exercise menstruate more copiously than those in the humbler walks of life who from necessity are obliged to labor that they may live. This exactly what upon a moments reflection we would infer, there being in the latter class an increased waste of the system calling for an increased supply of repairative material which of course comes from the blood, in that manner consuming a part of it which otherwise would have been thrown off at each menstrual period. The excitement is moreover measureably withdrawn from the uterus to the muscles. The influence of climate is very

obvious increasing or diminishing the discharge according as the patient resides in a warm or cold climate, and one of the authors speaks of a case in which the female menstruates more copiously in summer than in winter. But notwithstanding the modifications of climate, diet &c. the amount may usually be stated to be from three to five ounces. The discharge sometimes ceases for a short period and either spontaneously or under medical treatment again commences and continues on without further disturbance. This I saw last summer in the case of a servant girl whose feet became wet whilst standing at the washtub, she was seized with nausea vomiting and pain in the back accom-

panied by an entire cessation of the flow which however soon returned upon applying hot bricks to the lower extremities administering warm teas and a dose of Cal. Hydrarg.

The menstrual periods is with by far the majority of women on or about the twenty-eighth day from the commencement of the preceding attack or once in each lunar month, which fact led to the popular belief that the influence of the moon determined its periodicity. It is scarcely worth while for me to say that such is not the case while so many women can testify to the same. The cause of this periodicity is of course the evolution of the Graafian vesicle but why this should become developed on or about the twenty-eighth day is

one of the laws of nature which we in our present condition do not understand; - It is governed by the same laws that regulate the various organs of the body in the performance of their respective functions.

Having considered the cause nature duration & of menstruation we come next to a consideration of the phenomena that attend its first onset in the young girl and finally its complete cessation in advanced age. Menstruation varies in its period of commencement according to the influence of climate, the moral and social relations by which she is surrounded though it may in our temperate latitudes usually be stated at from the fourteenth to the sixteenth year of age, yet bearing in mind that many

females menstruate as early as the twelfth.
At this time the voice becomes softer
and the countenance loses timidity, which
is fostered in the more delightful years of
childhood. The mammae, as we would infer
from the great sympathy existing between
them and the uterus, become enlarged
the nipple more prominent and the skin
surrounding them of a darker hue owing
probably to the increased vitality of blood.
The pubic hairs become enlarged, the acetabula
become more widely separated and the female
naturally acquires the waddling gait peculiar
to this sex. Pains in the back and loins
Menstruation and itching of the pudenda, which
is now being covered with hair, also occur giv-
ing rise in many instances to a general febrile

reaction, which may last a day or two or longer when the discharge commences, which is at first mucus but soon becomes mingled with blood. This continues for a shorter or longer time varying from eight or twelve hours up to eight three or four days for at this early period of the catamenia the duration of the flow is not so regular as it is at a later time of life when the function has become established. This series of phenomena may not all be present in a given case, but many or few will invariably be perceptible. Cases of precocious and retarded menstruation are recorded but of these I have little to say, they being due to an abnormal development of the system. The catamenial function being once established continues on without interruption save by sickness.

pregnancy or by nursing, to the forty-fifth year of life at which period it usually ceases though sometimes continues until the fifty-fifth. This period is looked upon by most women as being rather a critical one, but Statistics would not lead us to the conclusion, for the mortality at this age is not greater than at other times. It is true, I think, that where disease is in existence it is liable to undergo a more rapid development on account of the cessation of the menstrual flow.

Such then are my views concisely expressed upon one of the most beautiful physiological processes in the human economy. Its interest might perhaps have been somewhat increased could I have within proper limits considered the anatomy of the various parts concerned in the performance of the function.

Finis.